A STUDY TO ASSESS THE EFFECTIVENESS OF SENSORY STIMULATION TECHNIQUE ON SENSORY PERCEPTUAL ABILITY AND EMOTIONAL WELL-BEING ON MENTALLY CHALLENGED CHILDREN ATTENDING A SELECTED SPECIAL SCHOOL, AT DINDIGUL DISTRICT.

REGISTER NUMBER: 301432853

A DISSERTATION SUBMITTED TO THE TAMILNADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING.

OCTOBER 2016

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

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CERTIFICATE

This is the bonafide work of **Mr.V.Kathiresan** M.Sc Nursing II year student from Jainee College of Nursing, Dindigul, submitted in partial fulfillment for the Degree of Master of science in nursing, under The Tamilnadu Dr.M.G.R.Medical University, Chennai.

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Date :

‘‘EFFECTIVENESS OF SENSORY STIMULATION TECHNIQUE ON SENSORY PERCEPTUAL ABILITY AND EMOTIONAL WELL-BEING ON MENTALLY CHALLENGED CHILDREN ATTENDING A SELECTED SPECIAL SCHOOL".

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ABSTRACT

Title: A Quasi Experimental study to assess the Effectiveness of sensory stimulation technique on sensory perceptual ability and emotional well-being on mentally challenged children attending a selected special School, Dindigul. **Objectives:** To assess the level of sensory perception and emotional wellbeing among mentally challenged children by doing pre-test and post-test among experimental group. To assess the level of sensory perception and emotional wellbeing among mentally challenged children by doing pre-test and post-test among control group. To compare the level of sensory perceptual ability and emotional wellbeing among both experimental and control group. To associate the level of sensory perception and emotional wellbeing with Demographic variables among experimental and control group. **Hypotheses:** There will be significant difference between the post-test score of sensory perception in experimental and control group among mentally challenged children. There will be significant difference between the post-test score of emotional well-being in experimental and control group among mentally challenged children. There will be a significant association between the level of sensory perception and their selected demographic variables in experimental group and control group among mentally challenged children. There will be a significant association between the level of emotional well-being and their selected demographic variables in experimental group and control group among mentally challenged children. **Research method:** It was Quantitative evaluate approach was used in this study to assess the Effectiveness of sensory stimulation technique on sensory perceptual ability and emotional well-being on mentally challenged children among boys and girls between age group between 5-15 years at Akshara school, Amma Illam, Puthiya uthayam special school, Dindigul. A quasi experimental pre and post-test control

group design is selected for the study to assess the effectiveness of sensory stimulation technique on sensory perceptual ability and emotional wellbeing among mentally challenged children. **Result:** Among the sensory perceptual ability it reveals that in experimental group the mean value is 96.8 was lesser than mean post test value 103.2 in the control group. The S.D value is 20.6 in the experimental group and 23.3 in the control group. The obtained ‘t’ value ’18.6 was statistically significant at p(<0.001).. The above findings indicates that there is a significant difference in the mean post test level of sensory perceptual ability among mentally challenged children. Thus proving the effectiveness of sensory stimulation techniques in the experimental group. Among the emotional wellbeing. It reveals that in experimental group the mean value is 32.0 was lesser than mean post test value 37.6 in the control group. The S.D value is 6.3 in the experimental group and 8.2 in the control group. The obtained ‘t’ value 6.1 was statistically significant at p(<0.001). The above findings indicates that there is a significant difference in the mean post test level of emotional well-being among mentally challenged children. Thus proving the effectiveness of sensory stimulation techniques in the experimental group.

INTRODUCTION

CHAPTER I

INTRODUCTION

"Children can color the illustrations and read how children living with disabilities are like ordinary children but require a little special attention."

-GARRISON KEILLOR

BACK GROUND OF THE STUDY

Watching a young child grow is a wonderful and unique experience. Learning to sit up, walk and talk are some of the major milestones a child will achieve. Normal children learn the skills of daily living such as feeding, dressing, toilet training, and social skills such as playing, and interacting with others easily, Mental retardation is defined as significantly sub-average general intellectual functioning, existing concurrently with deficits in adaptive sensory perception and manifested during the developmental period that adversely affects a child's educational performance. The terms Mental Retardation, Intellectual disability and mental challenge are used interchangeably. Intellect comprises perception, memory, recognition, conceptualization, convergent and divergent reasoning (creativity and classification), verbal facility and motor competence. There is noticeable deficiency in motor, cognitive, social, and language functions. Mentally challenged child is complicated by physical and emotional problems. The child may also have difficulty with hearing, sight or speech, which can lower the child's quality of life. Mentally challenged children at homes are lifelong pressure for parents. Though a life-long condition, however, in most individuals, those parts of the brain that are not damaged continue to develop. Therefore, they continue to acquire skills and abilities as they grow older. Proper handling, training and treatment can make them to live self-sufficiently. Although attention to their disabilities is important, paramount is their need to early stimulation interventions, health care and education. **(Lalitha, 2009)**

Sensory stimulation are techniques that encourage and teach children to use and develop their sensory (vision, hearing and touch) and motor (grasping, reaching, manipulating, and transferring) faculties by actively engaging the child by caressing, talking, showing bright objects, playing to elicit laughter, tickling, gentle massaging, bouncing, putting the child in different positions and places, using toys and play materials

to arouse the child's interest, guiding the hands to manipulate things and so on. Sensory stimulation during childhood enhances the intellectual functioning and learning skills in children. Children with developmental delay need it all the more, because they are prone to under stimulation. **(Cooper, 2010)**

NEED FOR THE STUDY

The World report on disability, 2014 reveals that of the more than one billion people in the world who are disabled, 110-190 million encounter significant difficulties in their daily lives**.** It is a shocking and alarming fact that approximately 2.5 to 3% of the total population are mentally challenged which in most cases is a lifelong condition. In surveys of the general population in India among people of all ages, it has been found that around 2% are mentally challenged. In other words, in a village of 1000 people, 20 people are mentally challenged. Only in children, (under 18 years of age) there will be about 3% of cases with mental retardation. Mild mentally challenged are much more common than severe mentally challenged, accounting for 65 to 75% of all cases, who are considered the educable and trainable. **(WHO, 2013)**

A community-based cross-sectional study carried out in 2013, in selected villages in the state of Tamilnadu in India, showed that the overall prevalence of mental disability was 2.3%. It is estimated that by 2020, 15% of the disability-adjusted life-years (DALYs) lost would be due to mental and behavioral disorders. The life time prevalence of developing one or more mental and behavioral disorders is estimated to be 25%.Limitations in both understanding hazards and coping with environmental challenges causes increased injury risk in this population. The incidence of unintentional injuries among mentally challenged children has been shown to be twice that of normal children. Avoidance of exposure to injury hazards entails a superior cognitive function to that of recognition alone. Mentally challenged have limited capacity for these functions, therefore their higher injury risk is not unexpected. It is important to train the mentally challenged child in all the possible ways and teach him how to survive and progress in the world. **(Daisy, 2013)**

Sensory stimulation refers to a variety of techniques that arouse the senses of the child. Sensory stimulation and perceptual knowledge are of importance in these children as it will help the child to be more independent. It can to an extent reduce the risk of

injuries, in these children. Specific stimulation of the primary senses in an environment that excludes all extraneous stimulation makes perception and interpretation of sensations easier for children. **(Mary.C.Townsend)**

The reported benefits of sensory stimulation therapy includes positive changes in sensory perception, improved task concentration, an increase in a variety of skills such as awareness of self, social interaction sensory perceptions, communication, exploration and manipulation of stimuli, relaxation, a reduction in stereotypic self-stimulatory sensory perceptions and an increase in adaptive sensory perceptions such as exploratory sensory perception or initiating contact with others. The experience of doing something positive and spending 'quality time' with a patient serves to raise staff morale and reduce staff burn-out. It provides an opportunity for carers to focus on the preferences of patients and legitimises spending time with them. Thus sensory interventions can play a role in nursing care and treatment. **(Symington, 2013)**

Since the existing research is promising with positive effects on the clients in mental health care, caregivers and staffs; the student researcher felt the need for the respective title of study.

STATEMENT OF THE PROBLEM

Effectiveness of sensory stimulation technique on sensory perceptual ability and emotional well-being on mentally challenged children attending a selected special School, Dindigul.

OBJECTIVES OF THE STUDY

1. To assess the level of sensory perception and emotional wellbeing among mentally challenged children before and after administering sensory stimulation technique among experimental and control group.
2. To determine the effectiveness of sensory stimulation technique on sensory perception and emotional wellbeing among experimental group.
3. To compare the level of sensory perceptual ability and emotional wellbeing among both experimental and control group.
4. To associate the level of sensory perception and emotional well being with Demographic variables.

HYPOTHESIS

H_1: There will be significant difference between the post-test score of sensory perception in experimental and control group among mentally challenged children.

H_2: There will be significant difference between the post-test score of emotional well-being in experimental and control group among mentally challenged children.

H_3: There will be a significant association between the level of sensory perception and their selected demographic variables in experimental group and control group among mentally challenged children.

H_4: There will be a significant association between the level of emotional well-being and their selected demographic variables in experimental group and control group among mentally challenged children.

OPERATIONAL DEFINITION

Effectiveness: refers to the improvement in the level of motor activity among moderate mentally challenged children after providing the sensory stimulation technique

Mentally Challenged Children: Children with IQ range which is found to be moderate mentally challenged (IQ level in between 35-50) or below and deficit in functional sensory perception were considered as mentally challenged children.

Sensory: The passive process of bringing information from the outside world into the body and to the brain.

Perception: It is the active process of selecting, organizing, and interpreting the information brought to the brain by the senses

Sensory stimulation: The process of stimulating the senses of the child, through auditory (playing music recordings), visual (balls of multi colours), tactile (different textured clothes), olfactory (aromas) and gustatory methods (sweet candy) for 15 minutes twice a day for 5 times in a week, for 4 weeks.

Special School: A school for children who are unable to benefit from ordinary schooling because they have learning or physical disabilities**.**

Well being: A good or satisfactory condition of existence; a state characterized by health, happiness, and prosperity; welfare

ASSUMPTIONS

The study assumes that:

1. Mentally challenged children may have low sensory perception.
2. The sensory stimulation may improve the sensory perception on mentally challenged children.

DELIMITATIONS OF STUDY

The study is delimited to,

- Mentally challenged children with the age group of 5-14 years
- Living in hostel at selected special school.
- Willing to participate in the study
- Available during data collection

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITRATURE

PART-A

The task of reviewing literature involves the identification of selection of critical analysis and reporting on the particular problem that has been chosen for the study.

The review of literature is presented under the following subdivisions

Literature related to:

1. Literature related to sensory stimulation techniques.
2. Literature related to sensory stimulation techniques and mentally challenged children.
3. Literature related to mentally challenged children and emotional well-being.

Literature related to sensory stimulation techniques

Binu john (2012) He conducted a study in the stages special school at Mangalore. The group consisted 40 mentally challenged children with sensory and emotional problems of age 5-15 years. Among these 40 children's were selected with simple random sampling by lottery method without replacement. The sensory stimulation technique was given this group for 30 days on 31stday the post test was done. The result show that the paired `t` value is 11.7 for sensory perceptual ability and 9.3 is for emotional well-being

Wilbarger, (2011). Another term frequently used to refer to sensory over-responsively is sensory defensiveness. Sensory defensiveness refers to multiple sensory system involvement while tactile defensiveness is usually limited to touch. Sensory defensiveness is found in the tactile, vestibular, and proprioceptive systems as well as auditory, oral, and visual systems and sense of smell Wilbarger proposed three levels of severity associated with defensive reactions including mild, moderate, and severe responses. A child's responses are measured by the impact of the over-responsiveness to their participation in daily life. A child may be classified as having sensory preferences or as having difficulties performing activities of daily living due to sensory over-responsiveness

Baranek and Berkson (2010), there are varying views about the processes of tactile defensiveness that include an imbalance in inhibitory responses, differing neurological thresholds or limbic system involvement. They also found a possible explanation for behavioural responses in children who met the criteria for tactile defensiveness in that they may have lower thresholds explaining the child's responses to tactile stimuli. This would mean that gentle touch for a child with tactile defensiveness may influence his/her response to include negativity, withdrawal or avoidance to stimulation.

Holling H. et., (2010) conducted a study to assess the sensory perceptional problems among mentally challenged children and adolescents in united kingdom. The study group was 14478 children and adolescents aged 3-17. They found that the most prevalent problematic among mentally challenged children's are sensory perceptional problems (g=11.9%,b=17.9%) emotional problem (g=4.8%, b=10.8%).

Atten disord J. et (2010), revealed that, measuring the teacher attitude and expectations toward mentally challenged children's and development of the test of knowledge about sensory problems. The attitudes, expectations, and behaviors of teacher toward mentally challenged children's may have a lasting impact on the academic self-efficacy. This psychometric approach was utilized to reduce pattern of response disortions that produce systematic errors in direct attitudinal assessment.

Garcia- castellar. R. et al (2009) conducted a study to find out the interactions of mentally challenged children with sensory problems at school: specifically the socio-metric status and the feature of rejected children. 23 children from primary school (2^{nd} to 5^{th} degree) of castell on were examined, using socio metric tasks and sensory perception scales for mentally challenged children's socio metric tasks shows that the children were preponderantly rejected by their school mates, and the reason were low in sensory perception level and behaviour.. Our finding established the severity of sensory problems in these children at school.

Benson and Koomar (2011) found that children, who were gravitationally insecure, or over-responsive to movement, frequently display avoidance, emotional, and/or postural responses when presented with sensory intense play requiring movement. May-Benson and Koomar identified avoidance behaviours as degrees of hesitation from no hesitation to complete refusal. They discussed emotional behaviours as

a range of affect from neutral to extreme fear. Postural responses were proposed as normal to stiff and rigid body movements upon presentation of the movement activity. May-Benson and Koomar's work was related to gravitational insecurity (vestibular over-responsivity), however, based on clinical experience, these behaviours may be observed in other types of over-responsivity as well. It is anticipated that children with over-responsivity will have escape-based behaviours, and these will be observed through a child's avoidance, emotional, and postural responses when presented with sensory intensive play that is part of sensory-based interventions incorporating movement and/or touch

Philaithis. A, et al (2010) conducted a prevalence study of mentally challenged children, Greece the study combined information from both parents and teacher for 1708 special school children attending the first grade in 101 classes of 55 special schools. Result show that both questionnaires were completed for 1285(75.2%) children. Among them, 84 children met the criteria for sensory perception problems. The estimated prevalence was 8.8% for boys and 4.2% for girls no significant differences were observed regarding urban, semi-urban or rural residents.

Miller et al. (2012) children with Sensory Over-Responsivity may present with particular behaviours more quickly and with greater intensity than those children who have typical responses to sensory intensive play. Observed problematic behaviours include negativity, impulsivity, aggression, avoidance, and withdrawal

Geraffinoos .y. et al (2008), examined the general practice of pedagogic management by teachers of special school children in the class room. Despite the importance of the schools do not have sufficient knowledge about the foundations and principles of treatment concerning sensory problems nor do they receive adequate training how to deal with sensory related problem in the class room. The result revealed that there is a significant lack of cooperation between schools, parents and the therapeutic institutions inhibiting a multimodal treatment.

2. LITERATURE RELATED TO SENSORY STIMULATION TECHNIQUES AND MENTALLY CHALLENGED CHILDREN:

Kearns, D.(2010),stated that an increasing number of students with difficulties such as mentally challenged children's seen in school in both sensory perceptions and

emotion. This single case study investigated the effectiveness of sensory stimulation techniques with a 5 year old male. Sensory stimulation techniques focused on pre activities using three media. The pre/post-test measurement tool was the formal elements sensory stimulation techniques scales (FEATS) (Gantt & Tabone, 1998). The setting is Michael's school day, France. Result indicated an increase in sensory perceptions level after techniques given. A sensory stimulation technique was found to be a useful intervention.

Arnold (2009), stimulant medication (amphetamine and methylphenidate) with sensory stimulation techniques are the best-documented treatments for mentally challenged children, but their short pharmacokinetic and sensory perception half-lives have historically produced irksome time-course effects. This article summarizes clinical principles that physicians may find useful in managing this sensory stimulation treatment armamentarium.

Vargas and Camilli (2010) performed ameta-analysis of studies that compared sensory integration with no treatment; sensory integration with alternative treatments; and sensory integration, no treatment, and alternative treatments. After measuring and weighing effect sizes, these authors stated that sensory integration was not shown to be any more effective than alternative treatments with respect to identified outcomes (i.e., psycho educational, behaviour, language, motor, and sensory perceptual skills). However, in their critique, Vargas and Camille did not identify what was considered to be alternative treatments. While there is much research to be done in sensory integration, there is evidence that suggests sensory integration is effective. The conclusion is that sensory integration, at this time, is not proven nor disproven from an empirical perspective

Gold, (2010) he conducted the preliminary study compared the daily living skills of children with sensory stimulation techniques and without mentally challenged children's, and the influence of a social skills training group on these skills. The result emphasizes the need for a focus upon occupation in assessment and treatment of children with sensory perception problem.

Myers da, (2011) the physicians is uniquely qualified to manage the multiple facts of mentally ill children's. This clinically oriented update reviews the current state of the sensory stimulation techniques regarding diagnosis and management of low sensory

perception children. Three case reports emphasize the wide variation of clinical problems presented by this frequently occurring disorder of childhood. Epidemiology, differential diagnosis, associated features, neurobiological mechanism, treatment long-term outcome, sensory problems in children's are addressed. Although medication is an important tool in the treatment of this condition, follow-up studies confirm the importance of art intervention approach.

Kimball (2011) A study was conducted in Korea to evaluate the effectiveness of a multisensory intervention on the physical growth and health of orphaned infants with experimental group (n=28) and control group (n=30). In addition to receiving the routine orphanage care, infants in the experimental group received 15 minutes of auditory (female voice), tactile (massage), and visual (eye-to-eye contact) stimulation, twice a day, 5 days a week, for 4 weeks. That resulted in significantly fewer illnesses as well as significant gains in weight, length and head circumference, after the 4-week intervention period and at 6 months of age

Smitheman-brown, v.,& church, R.P.(2007) facilitating creative growth in mentally ill children with sensory problems and it using a single-subject, multiple-baseline research design , this study investigates the creative growth and sensory perception changes precipated by the work done in sensory stimulation techniques through employment of the mandala as an active centring device with children(N=8:4 experimental and 4 control , ages 10-13) was rated according to the guidelines of the formal elements. Sensory stimulation techniques scales (FEATS) (Gantt & tabone, 2000). Preliminary findings indicate that the mandala exercise has the effect to increasing attentional abilities and decreasing impulsive sensory perceptions overtime, allowing for better decision making, completion of task, growth in developmental level, and an interest in personal aesthetics.

C. Literature related to mentally challenged children and emotional well being

Spandler II (2010) conducted a qualitative study that was undertaken as part of a national research study to assess the impact of participatory emotional wellbeing for children with mental health needs. It explores how emotions and mental health projects may facilitate some of the key elements of what has been termed a recovery approach in

mental health. The elements like fostering of hope, creating a sense of meaning and purpose, developing new coping mechanism and rebuilding identifies.

Waller D (2010) started that aim of sensory stimulation techniques is to facilitate positive change through engagement with the therapist and the emotional wellbeing in a safe environment. This study explored how sensory stimulation techniques is used to help children with emotional, developmental and sensory perception problem and how change occur during the process of physical involvement with the materials through the making of a significant through sublimation of feelings into the images and through communication with the therapist .

David Soel, (2010) conducted a study to assess the emotional problems among mentally challenged children and adolescents in united kingdom. The study group was 1456 children and adolescents aged 3-17. They found that the most prevalent problematic among mentally challenged children's are sensory perception problems (g=11.9%, b=17.9%) emotional problem (g=4.8%, b=10.8%).

Williamson & Anzalone, 2012 conducted a study on mentally challenged children to assess the emotional well-being by using a single- subject multiple base line research design this study investigate the emotional problems among mentally challenged children. The result emphasizes the needs of the children are low and due to the lack of emotional wellbeing.

PART-B

CONCEPTUAL FRAME WORK

Conceptual models are made up of concepts, which are words describing mental images of phenomena and propositions which are statements about concepts. It provides a schematic representation of some relationship among phenomena.

Ernestine Wiedenbach's proposed a prescriptive theory for nursing which is described as conceiving of a desired situation & the ways to attain it.

The investigator adopted the Wiedenbach's Theory of helping art of clinical nursing 1964, for Conceptual Framework, According to this theory, nursing practice consists of 3-steps which include.

Step-I Identifying the need for help

Step-II Ministering the needed help

Step-III Validating that the need for help was met.

This theory shows nursing as an art based on a goal (or) central purpose. It consists of 3 factors central purpose, prescription & realities.

Step–I: Identifying the need for help

This involves determining the need for help. The investigator identified the level of sensory perception and emotional well-being among mentally challenged children by using short sensory profile and emotional well-being scale.

Step–II: Ministering the needed help

The provision of required help for the identified need. It has 2 components

(i) Central purposes
(ii) Prescription
(iii) realities

i. Central purpose

It refers to what the nurse wants to accomplish. It is the overall goal towards which a nurse strives and also it is based on the nurses' personal philosophy.

ii. Prescription

It involves the plan of care to achieve the purpose. In this study investigator administered sensory stimulation techniques for 10 minutes twice a day, at 9 am in morning and 7 pm in evening for 21 days.

iii. Realities

The five realities identified by Wiedenbach's are agent, recipient, goal, mean activities and framework.

Agent **:** The investigator is the agent.

Recipient **:** mentally challenged children (60 samples)

Goal **:** To improve the sensory perceptual ability and emotional wellbeing.

Mean Activities **:** Administration of sensory stimulation techniques.

Framework **:** Amma illam, puthiya uthayam, akshara special school.

Step-III: Validating that the need for help was met

Validation involves the outcome of sensory stimulation techniques on sensory perceptual ability among mentally challenged children in Amma illam, puthiya uthayam, akshara special school.

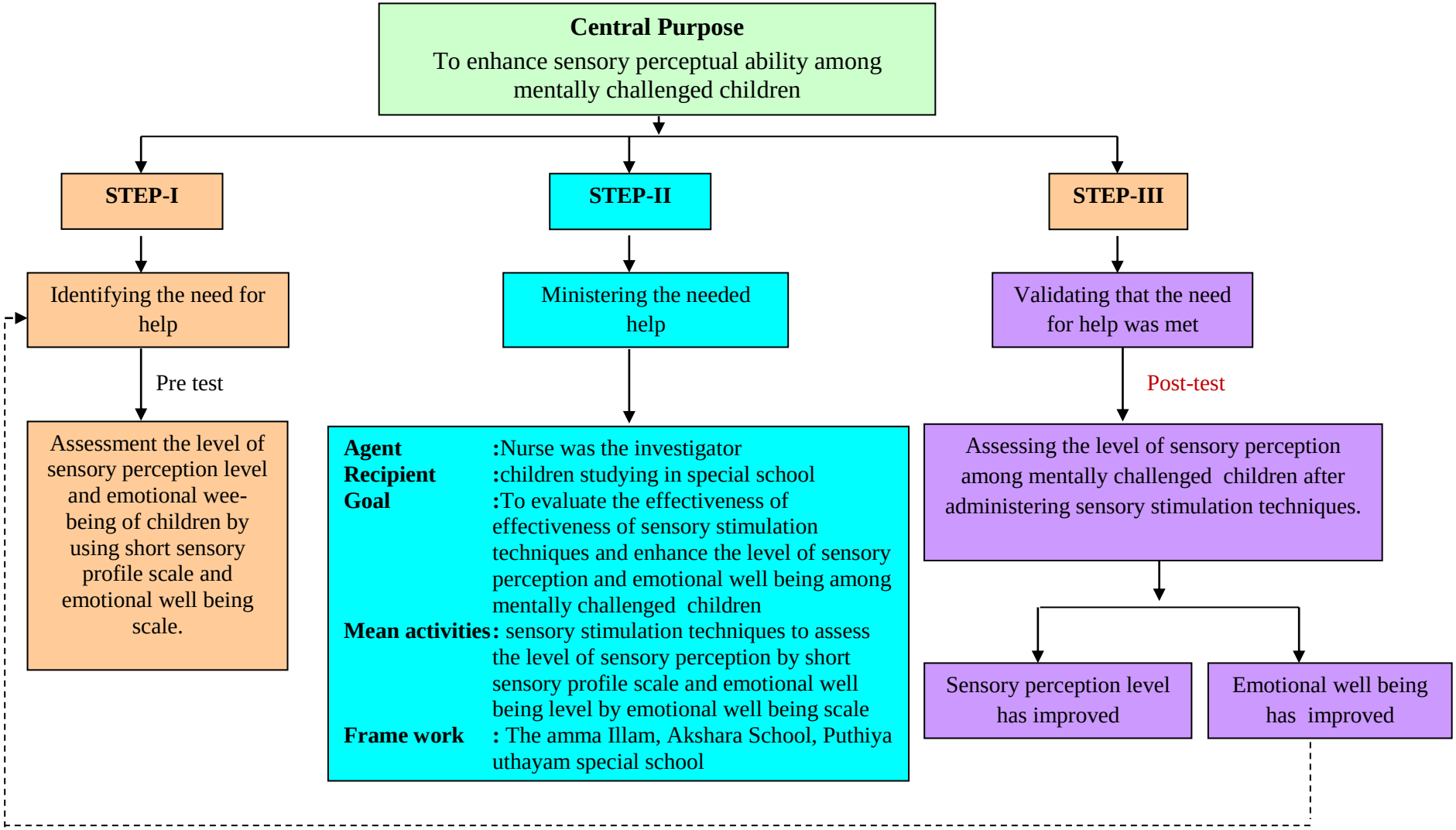


Figure – 1: Theoretical Framework Based on Wiedenbach's Helping Art Model for Clinical Practice

RESEARCH METHODOLOGY

CHAPTER III

RESEARCH METHODOLOGY

The research methodology indicates the general pattern of organizing the procedure for gathering valid and reliable data for an investigation. This chapter provides a brief description of the method adopted by the investigator in this study. It includes the research approach, research design, setting of the study, population, sample, sample size, sampling technique, description of the tool, pilot study, data collection procedure and plan for data analysis

RESEARCH APPROACH

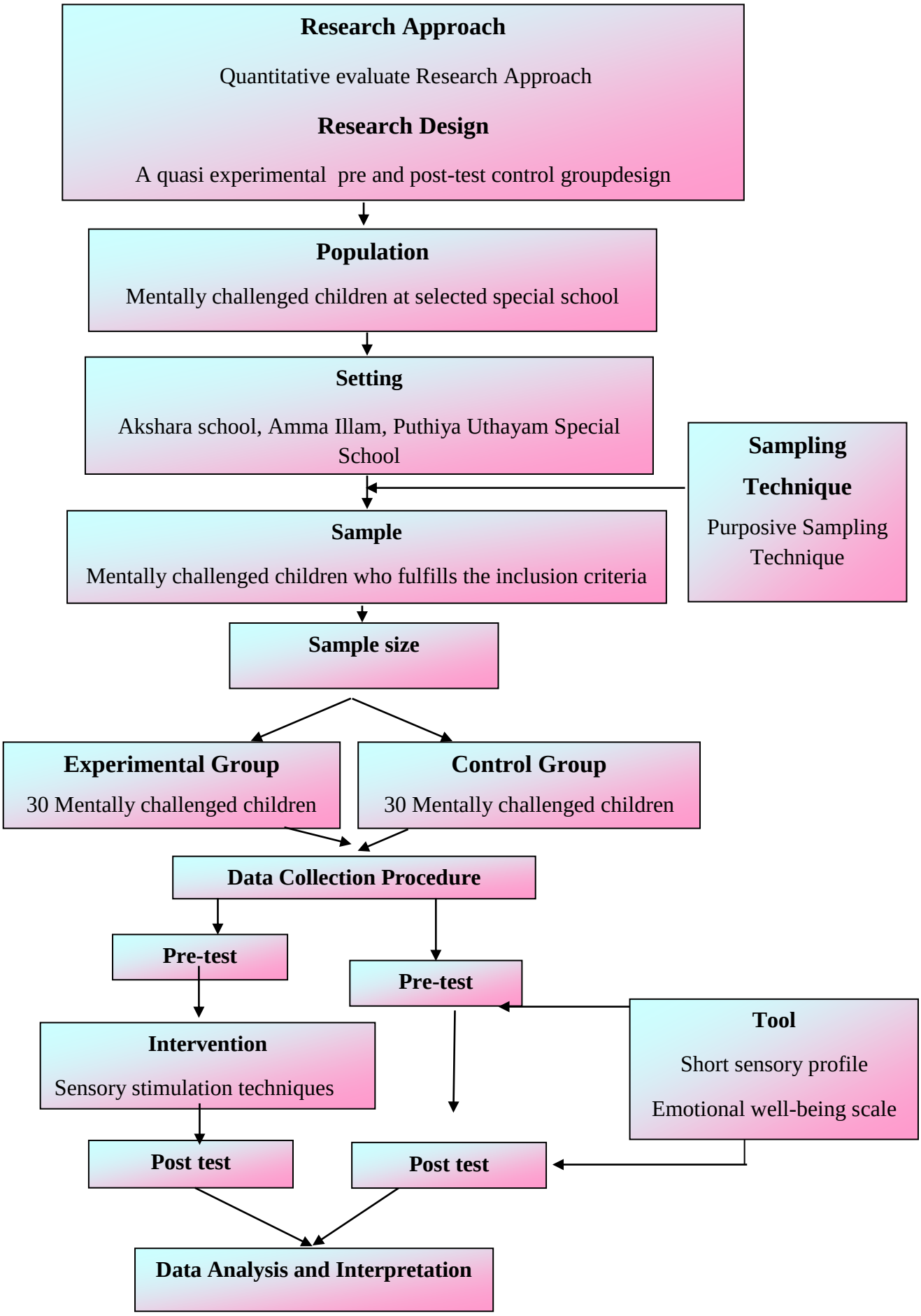
Quantitative evaluate approach was used in this study to assess the Effectiveness of sensory stimulation technique on sensory perceptual ability and emotional well-being on mentally challenged children attending a selected special school

RESEARCH DESIGN

A quasi experimental pre and post-test control group design is selected for the study to assess the effectiveness of sensory stimulation technique on sensory perceptual ability and emotional wellbeing among mentally challenged children at selected special school.

The study uses quasi experimental,

Group	Pre-test	Intervention	Post-test
Experimental group	O1	X	O2
Control group	O1		O2


Research Approach
Quantitative evaluate Research Approach
Research Design
A quasi experimental pre and post-test control groupdesign
Population
Mentally challenged children at selected special school
Setting
Akshara school, Amma Illam, Puthiya Uthayam Special School
Sampling Technique
Purposive Sampling Technique
Sample
Mentally challenged children who fulfills the inclusion criteria
Sample size
Experimental Group
30 Mentally challenged children
Control Group
30 Mentally challenged children
Data Collection Procedure
Pre-test
Pre-test
Tool
Short sensory profile
Emotional well-being scale
Intervention
Sensory stimulation techniques
Post test
Post test
Data Analysis and Interpretation

Key:

O1 - Pre assessment of the level of sensory perception and emotional well-being among mentally challenged children

X - Sensory stimulation technique

O2 - Post assessment of the level of sensory perception and emotional well-being among mentally challenged children

VARIABLES

Dependant Variables In this study dependent variables sensory perception and emotional well-being, sensory stimulation techniques.

Independent Variables In this study independent variables age, gender, birth order, religion, duration of stay, education level of care givers, education.

SETTING

This study was conducted in selected special schools namely 1.Akshara school, 2.Amma Illam, 3.Puthiya uthayam. Dindigul, Dindigul Dist.

POPULATION

The study population consists of all the mentally challenged children and care givers in to the special school at Dindigul.

ACCESSIBLE POPULATION

It refers to the aggregate of cases which conform to the designed criteria and which is accessible to the researcher as the pool of subjects or objects. In this study accessible was , to assess the problem of children with mental retardation, among 5-14 years.

SAMPLE & SIZE

A sample is the subset of the population selected to participate in research study, the children who are affected with mental retardation in special schools. Amma Illam,

Akshara school, Puthiya Uthayam were the study sample. The total sample size was 60, 30 in the experimental group and 30 in the control group.

SAMPLING TECHNIQUE

Sampling is the important step in research process .it is the process to selecting representatives units of subset of a population of the study. Purposive sampling technique was used for this study.

CRITERIA FOR SELECTION OF SAMPLES

Inclusion Criteria:

- Mentally challenged children aged between 5-14 years
- Mentally challenged children of both gender
- Mentally challenged children who were co-operative.
- Mentally challenged children who are in different phase of training program

Exclusion Criteria:

- Children with autism and visual disability.
- Children who are aggressive.
- Mental retardation associated with other mental disorder.

DESCRIPTION OF TOOLS

The research tool was developed by doing extensive literature reviews the primary and secondary source of literature were to develop and appropriate tool.

Tool consists of three sections:

Section I: DEMOGRAPHIC DATA

The demographic data consists of code no, age, sex, birth,, type of marriage of their parents and subject handling.

Section II: SHORT SENSORY PROFILE

It was standardized scale designed by WINNIE DUNN, Ph.D, OTR, FAOTA in the year 1999. It is simple well laid out consists of 38 items in that 7 items are tactile

sensitivity, 4 items are taste/smell sensitivity ,3 items are movement sensitivity ,7 items are under responsive/seeks sensation,6 items are auditory filtering, 6 items are low energy/weak, 5 items are visual/ auditory sensitivity. The rating scale was given to assess the sensory perception level of mentally challenged children.

VALIDITY:

Validity of the tool was obtained on the basis of nursing experts and medical experts in the field of psychiatric nursing. The tool was found to be validated and widely accepted as a standardized tool.

RELIABILITY:

Reliability of the tool to assess the effectiveness of sensory stimulation techniques was established using test – retest method. The rank correlation coefficient was used to calculate the reliability and this was found to be r= 0.83. It was considered reliable for preceding the study.

SCORE INTEPRETATION

The interpretation of scoring is graded as follows;

1 Indicate Always, 2 Indicate Frequently, 3 Indicates Occasionally, 4 Indicate Seldom, 5 Indicates Never.

Scoring Range

For each item the scoring was given as follows

190-155 indicates typical performance

154-142 indicates probable difference.

141-38 indicates definite difference.

Section II: EMOTINAL WELL-BEING SCALE

It was a non- standardized tool. It is simple well laid out consists of 16 items .the rating scale is helpful to assess the emotional well-being level of mentally challenged children.

SCORE INTEPRETATION

The interpretation of scoring is graded as follows;

1 Indicate Always, 2 Indicate Frequently, 3 Indicates Occasionally 4 Indicate Seldom, 5 Indicates Never.

Scoring Range

For each item the scoring was given as follows

16-36 indicate mild emotional well-being.

37-61 indicate moderate emotional well-being.

62-80 indicate high emotional well-being.

PILOT SUDY

The pilot study is a small preliminary investigation of the same general character as the major study, which is designed to acquaint the researcher with problems that can be corrected in preparation for the large research projects or is done to provide the researcher with an opportunity to try the procedures for collecting data **(daisy, 2012).**

The pilot study was conducted at Akshara, Amma Illam, Puthiya Uthayam special schools after getting permission from the principal of the special school.The investigator adopted a non-probability purposive sampling technique. Sample number of 6 mentally challenged children's in special school who fulfilled the inclusion criteria was selected, 3 samples were in the experimental group and another 3 samples in the control group. The purpose of the study was explained to the parents and teacher and written consent was obtained with reassurance that the data would be kept confidential.

The data related to demographic variables were collected from the client. Pre-test level of sensory perceptual ability of mentally challenged children was assessed by using SHORT SENSORY PROFILE scale and emotional well-being was assessed by using EMOIONAL WELL BEING SCALE. From the experimental and control group. A sensory stimulation technique was given to 3 samples in the experimental group for 2 weeks . The control group was instructed to maintain their current level of activities. At the end, post-test level of sensory perceptual ability of mentally challenged children was assessed by using SHORT SENSORY PROFILE scale and emotional well-being was assessed by using emotional well-being scale. The results of the pilot study showed a favourable response. There were no practical difficulties met by the investigator and the tool was considered to be reliable and appropriate. Hence the same procedure was decided to be followed in the main study.

DATA COLLECTION PROCEDURE

Written permission was obtained from the Mr. Mathivanan District disability officer Dindigul, Akshara school, Amma illam,Puthiya uthayam special school. Self-introduction was given and details regarding the nature of the study were explained to the special school.

The selected samples were approached with study questionnaire and the level of sensory perceptual abilities and emotional well-being was identified. Sensory stimulation techniques was given and were encouraged to be continued for 25 consecutive days.

At the end of 25 days of inducing the sensory stimulation techniques, the level of sensory perception and emotional well-being of the study subjects were reassessed, and the differences in score of test was considered as the effectiveness of sensory stimulation techniques.

SCHEDULES FOR DATA COLLECTION PROCEURE

S. No	Time	Name of the place	Number of subject	Pre test	Intervention	Post test
1	10am - 11am	Akshara, Amma Illam, Puthiy Uthayam special school	60	1-06-2016	2-6-2016 to 27-6-2016	28-06-2016

- Time spent to assess the sensory perception level and emotional well-being among mentally challenged children was 12 minutes approximately.
- Sensory stimulation techniques was given and was encouraged. The time spent was 20 minutes in the morning.
- A period of 25 days continuously given for the subjects and to continuing the sensory stimulation techniques after the test the level sensory perception and emotional well-being was reassessed (post-test).

DATA ANALYSIS

Description statistics

- Frequency and percentage distribution of sample according to demographic variables of mentally challenged children's.
- Mean and SD of pre-test and post-test level of sensory perception score among mentally challenged children.
- Mean and SD of pre-test and post-test level of emotional well- being score among mentally challenged children.

Inferential Statistics

- Paired T test to compare pre-test and post-test level of sensory perception among mentally challenged children.
- Chi- square test to find out the association of post-test level of sensory perception among mentally challenged children.

PROTECTION OF HUMANRIGHTS

Oral consent was obtained from the study sample before starting the data collection. Assurance was given and confidentiality was maintained. Children who were participated in this study were explained that they have the rights to with draw from this study at any point of time. There was absence of physical and psychological strain to the children who were participated in this study.

DATA ANALYSIS & INTERPRETATION

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data to study the effectiveness sensory stimulation techniques on sensory perceptual ability and emotional wellbeing among mentally challenged children.

ORGANIZATION OF DATA

Section A: DEMOGRAPHIC VARIABLES

a) Demographic variables with regard to the mentally challenged children's.

Section B: Level of sensory perception and emotional well-being on mentally challenged children in pre-test and post test

Section C: Mean and SD of pre-test and post-test level of sensory perception and emotional well-being among mentally challenged children.

Section D: Effectiveness of sensory stimulation techniques on sensory perceptual ability and emotional well-being among mentally challenged children .

Table 1: Frequency and Percentage distribution of Demographic Variable

S. No	Demographic Characteristics		Experimental group		Control group	
			f	%	f	%
1	**Age**	a)5-7 years	6	20	8	27
		b)8-10 years	13	43	11	37
		c)11-14 years	11	37	11	36
2	**Gender**	a)Male	24	80	23	77
		b)Female	6	20	7	23
3	**Birth Order**	a) First	22	73	13	43
		b) Second	7	24	12	40
		c) Third & above	1	3	5	17
4.	**Religion**	a) Hindu	21	70	19	63
		b) Muslim	4	13	3	10
		c) Christian	5	17	10	27
5.	**Education Level of Care giver**	a) Illiterate	6	20	5	17
		b) Primary	6	20	8	27
		c) Secondary	7	30	9	30
		d) Graduate	7	30	8	26
6.	**Type of Stay**	a)Hostel	12	40	12	40
		b) Days Scholar	18	60	18	60
7	**Education level**	a) Pre-primary	6	20	8	27
		b) Primary	16	53	12	40
		c)Upper Primary	8	27	10	33
8	**Duration Of stay**	a) Below 12 month	15	50	14	47
		b) 12month and above	15	50	16	53
9	**Mode of Delivery**	a) Normal	22	73	19	63
		b) Caesarean	5	17	8	27
		c) Vacuum	3	10	3	10

Table 1: A study reveals that in experimental group 6(20%) of the samples were in the age group of 5-7 years, majority 13(43%) of samples belonged to the age group of 8-10 years, 11(37%) belonged to age group 11-14 years. In the control group 8(27%) of the samples were in the age group of 5-7 years majority 11(37%) of samples belonged to the age group of 8-10 years, 11(36%) belonged to age group 11-14 years.

Regarding the gender status 24(80%) of the samples were male and 6(20%) of the samples were female in the experimental group. In the control group 23(77%) of the samples were male and 7(23%) of the samples were female.

Regarding birth order 22(73.3%) of the samples were first, 7(24%) of the samples are second, 1(3%) of the samples were third and above in the experimental group. In the control group 13(43%) of the samples were first, 12(40%) of the samples are second, 5(17%) of the samples were third and above.

Regarding the religion 21(70%) of the samples were Hindu, 4(13%) of the samples are Muslim, 5(17%) of the samples were Christian in the experimental group. In the control group 19(63%) of the samples were Hindu, 3(10%) of the samples are Muslim, 10(27%) of the samples were Christian.

With educational level of care giver, 6(20%) of the samples were Illiterate, 6(20%) of the samples had primary education, 7(30%) of the samples had secondary education and 7(30%) of the samples were graduates in the experimental group. In the control group, 5(17%) of the samples were Illiterate, 8(26.7%) of the samples had primary, 9(30%) of the samples had secondary and 8(26%) of the samples were graduates.

Regarding the type of stay 12(40%) of the samples were hostel and 18(60%) of the samples were days scholar in the experimental group. In the control group 12(40%) of the samples were hostel and 18(60%) of the samples were days scholar.

Regarding educational level , in the experimental group6 (20%) of the samples are pre-primary and 16(53%) of the samples are primary and 8(27%) of the sample are upper-primary. In the control group 8(27%) of the samples are pre-primary and12 (40%) of the samples are pre-primary and 10(33) of the samples are upper-primary.

Regarding the duration of stay 15(50%) of the samples were below 12 month and 15(50%) of the samples were above 12 month in the experimental group. In the control group 14(47%) of the samples were below 12 month and 16(53%) of the samples were above 12 month.

Regarding mode of delivery , in the experimental group 22 (73%) of the samples are normal and 5(17%) of the samples are caesarean and 3(10%) of the sample are vacuum. In the control group 19(63%) of the samples are normal and 8 (27%) of the samples are caesarean and 3(10%) of the samples are vacuum.

SECTION-A

Frequency and percentage distribution of the sample according to their demographic variables

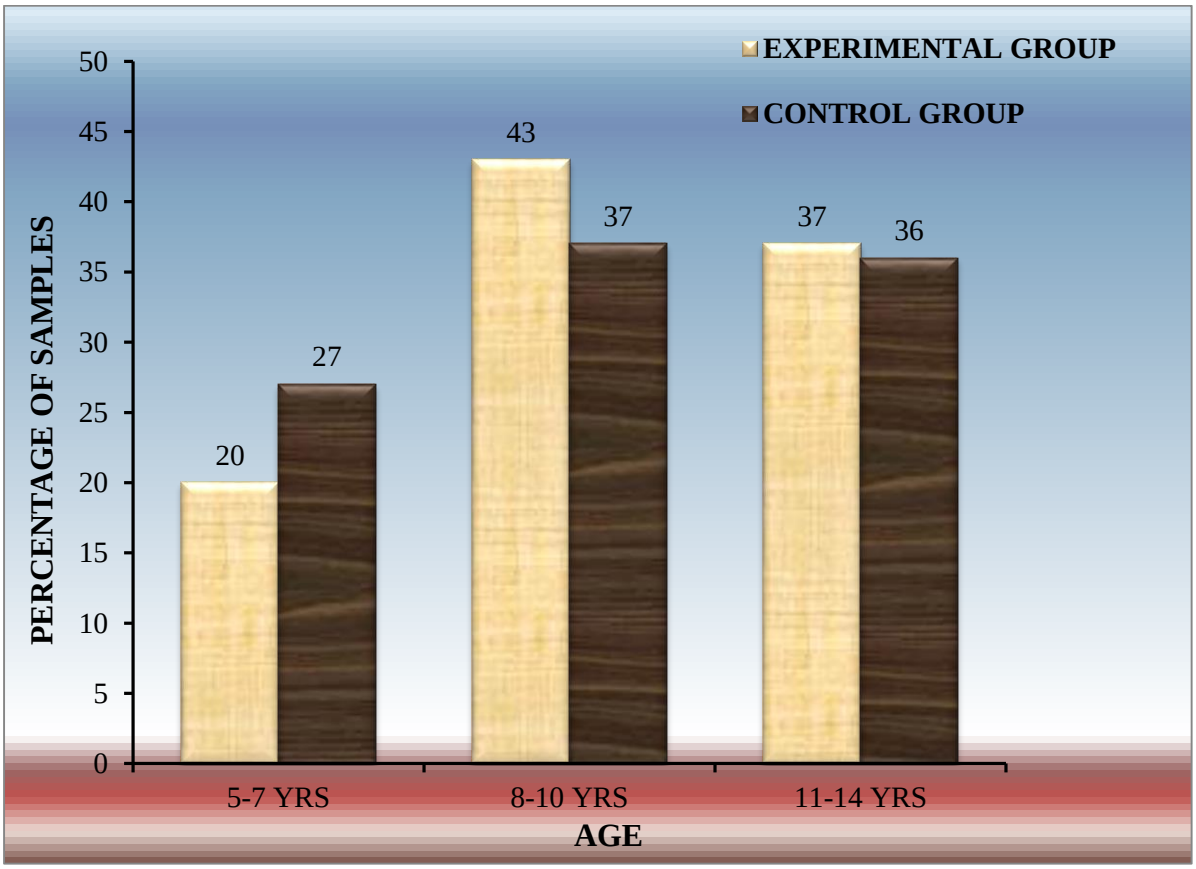


Fig (3) Frequency and Percentage Distribution of Age among mentally challenged children's

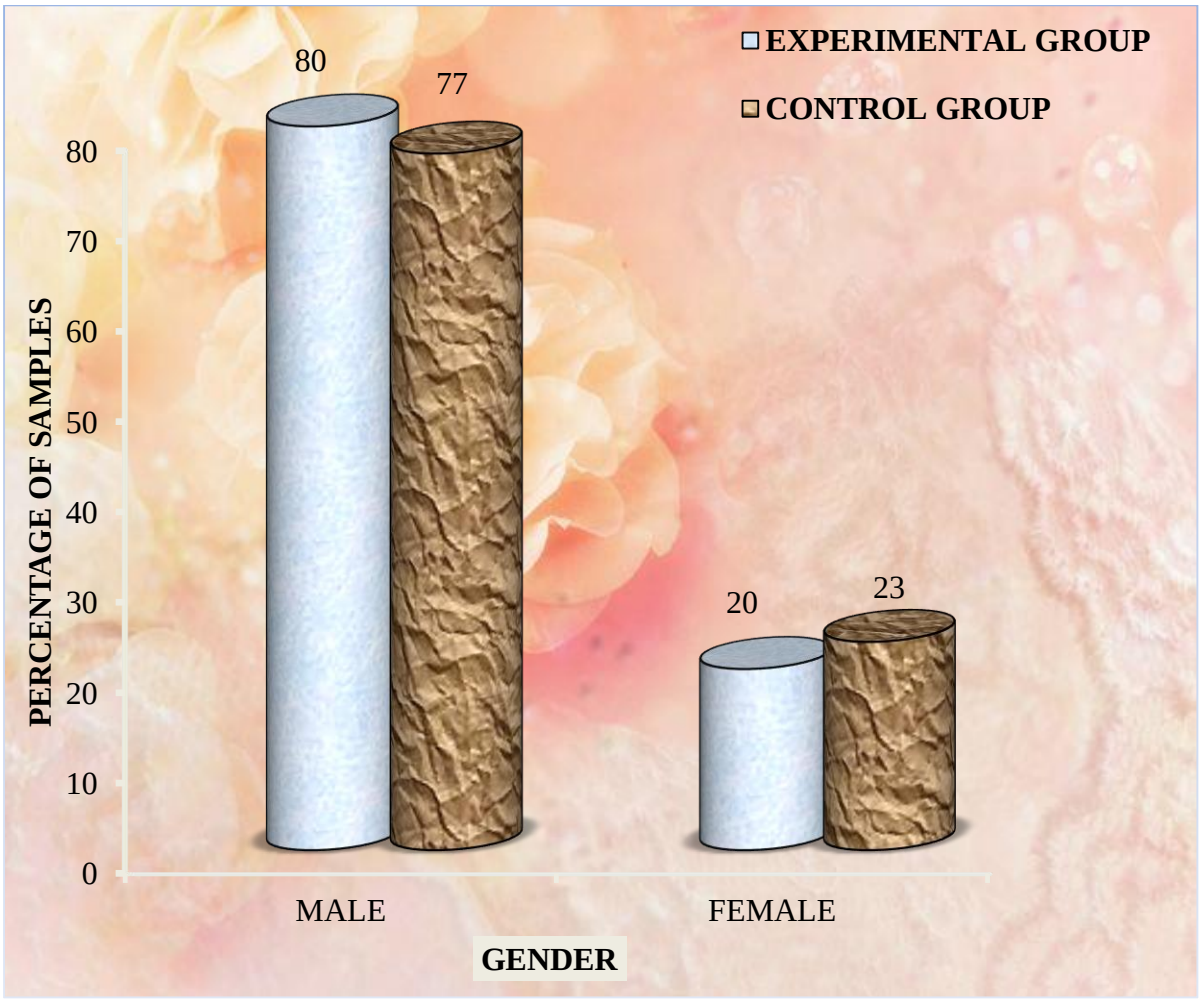


Fig (4.) Frequency and Percentage Distribution of Gender among mentally challenged children

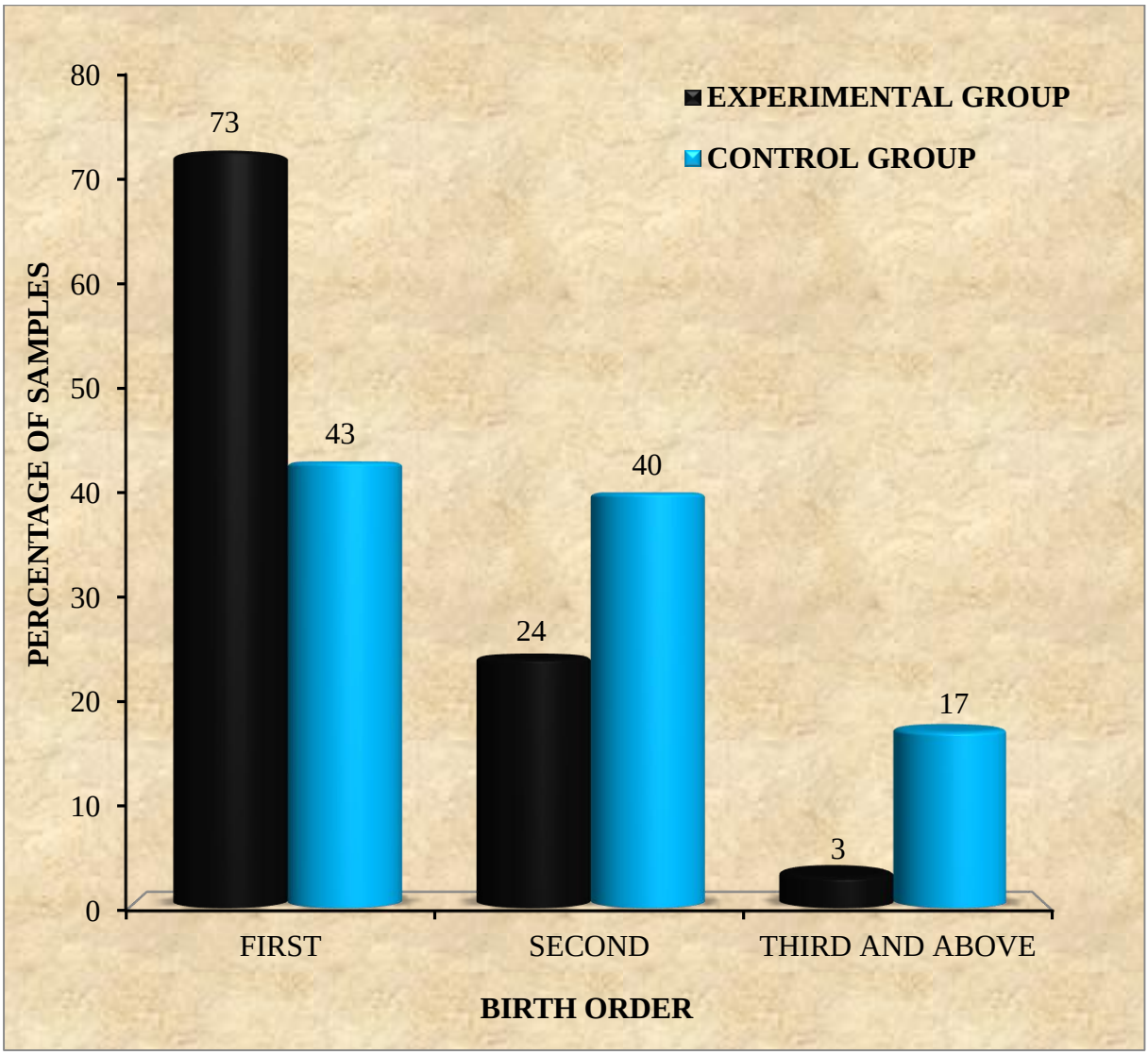


Fig (5.) Frequency and Percentage Distribution of birth order among mentally challenged children.

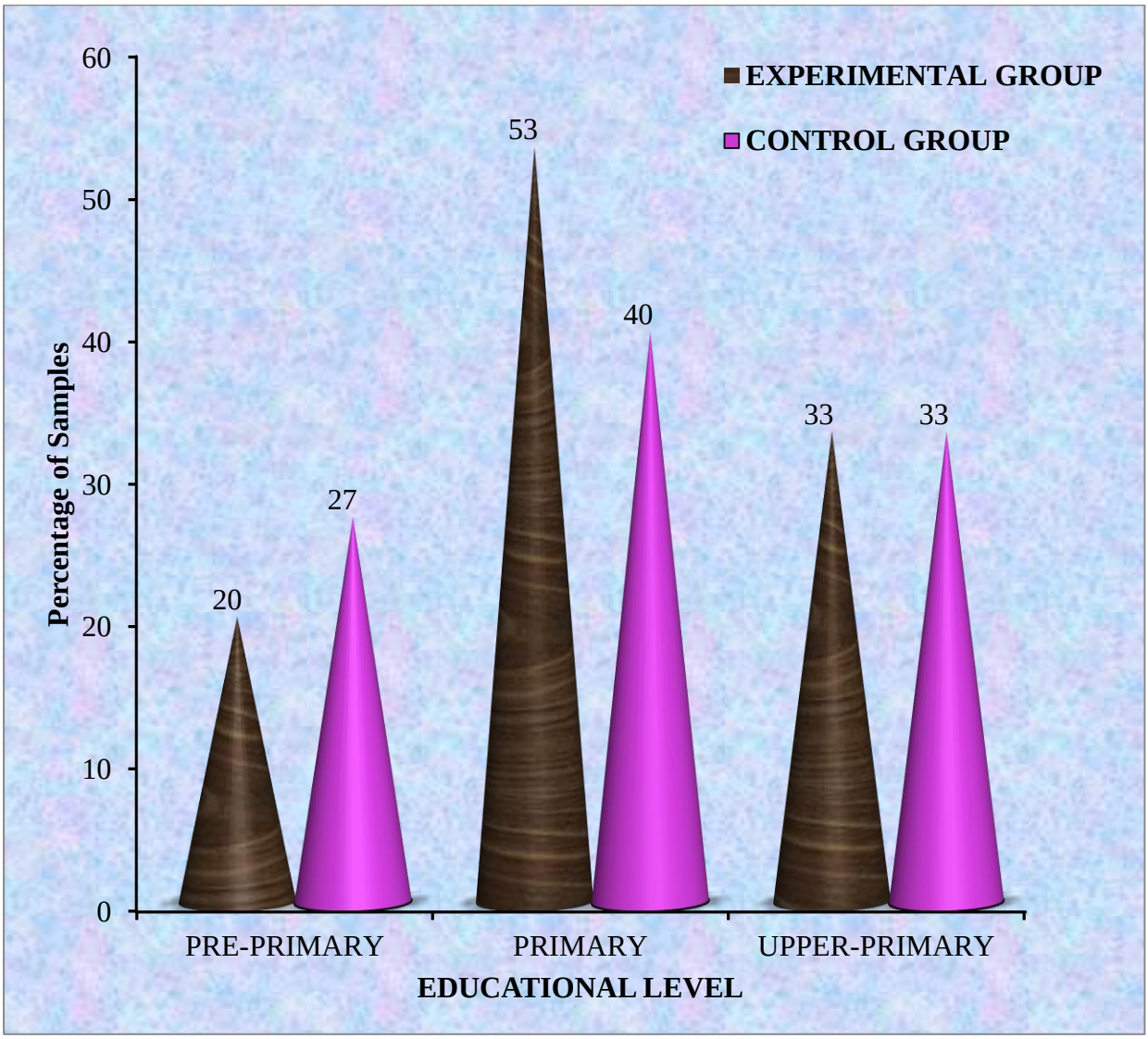
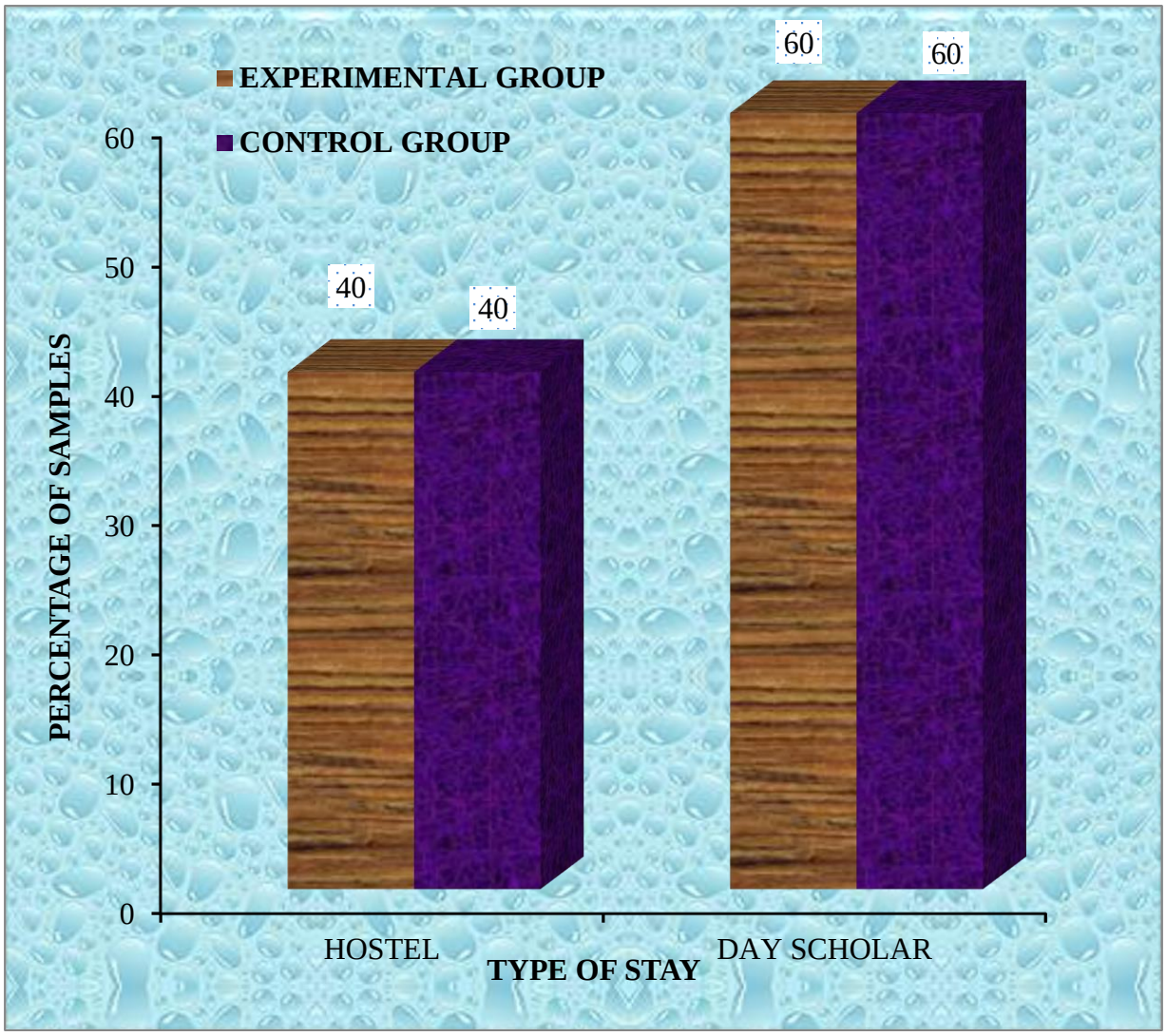


Fig (6) Frequency and Percentage Distribution of education among mentally challenged children's



Fig(7) Frequency and Percentage Distribution of type of stay among mentally challenged children's.

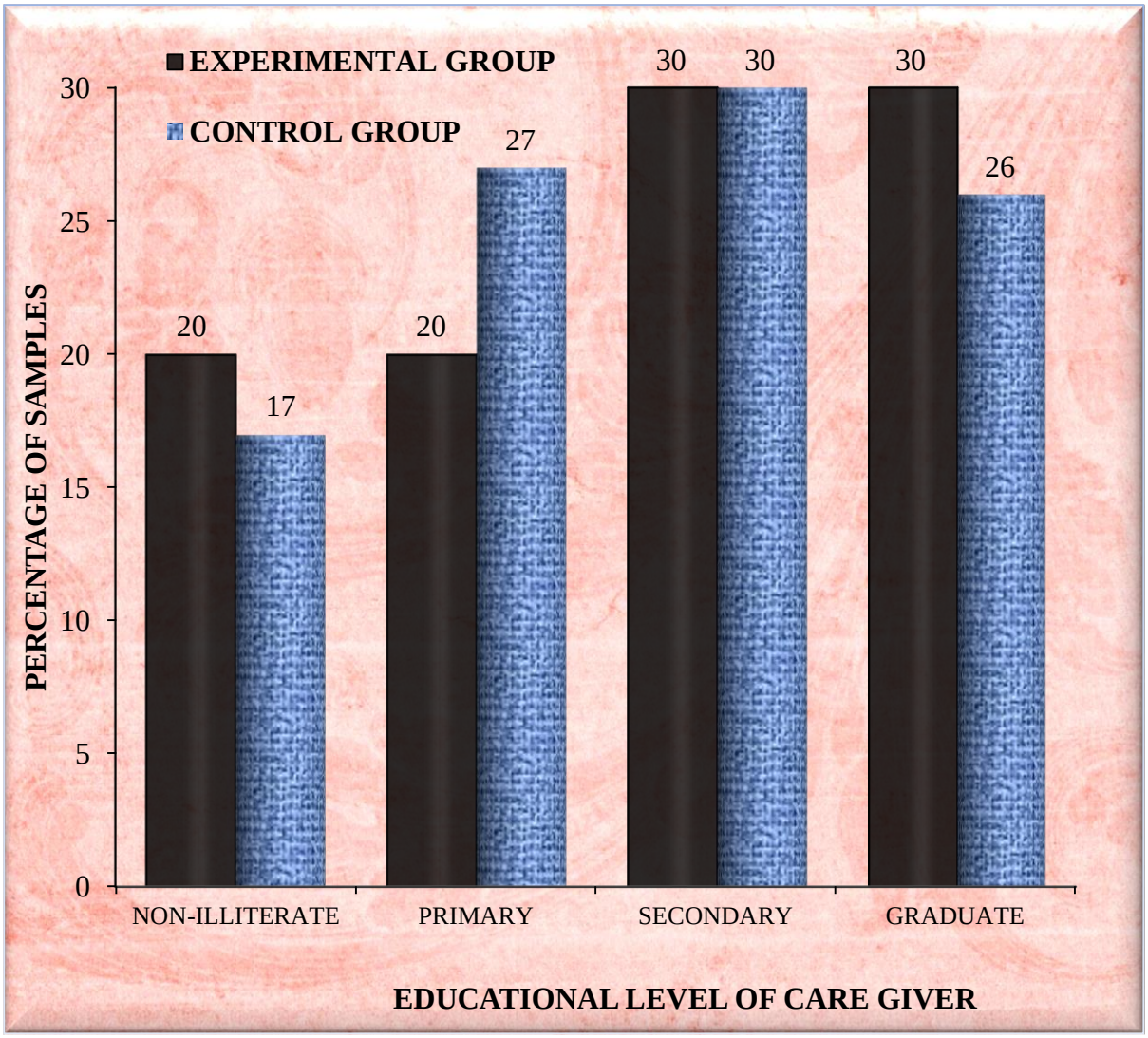


Fig (8) Frequency and Percentage Distribution of educational level of care giver among mentally challenged children's.

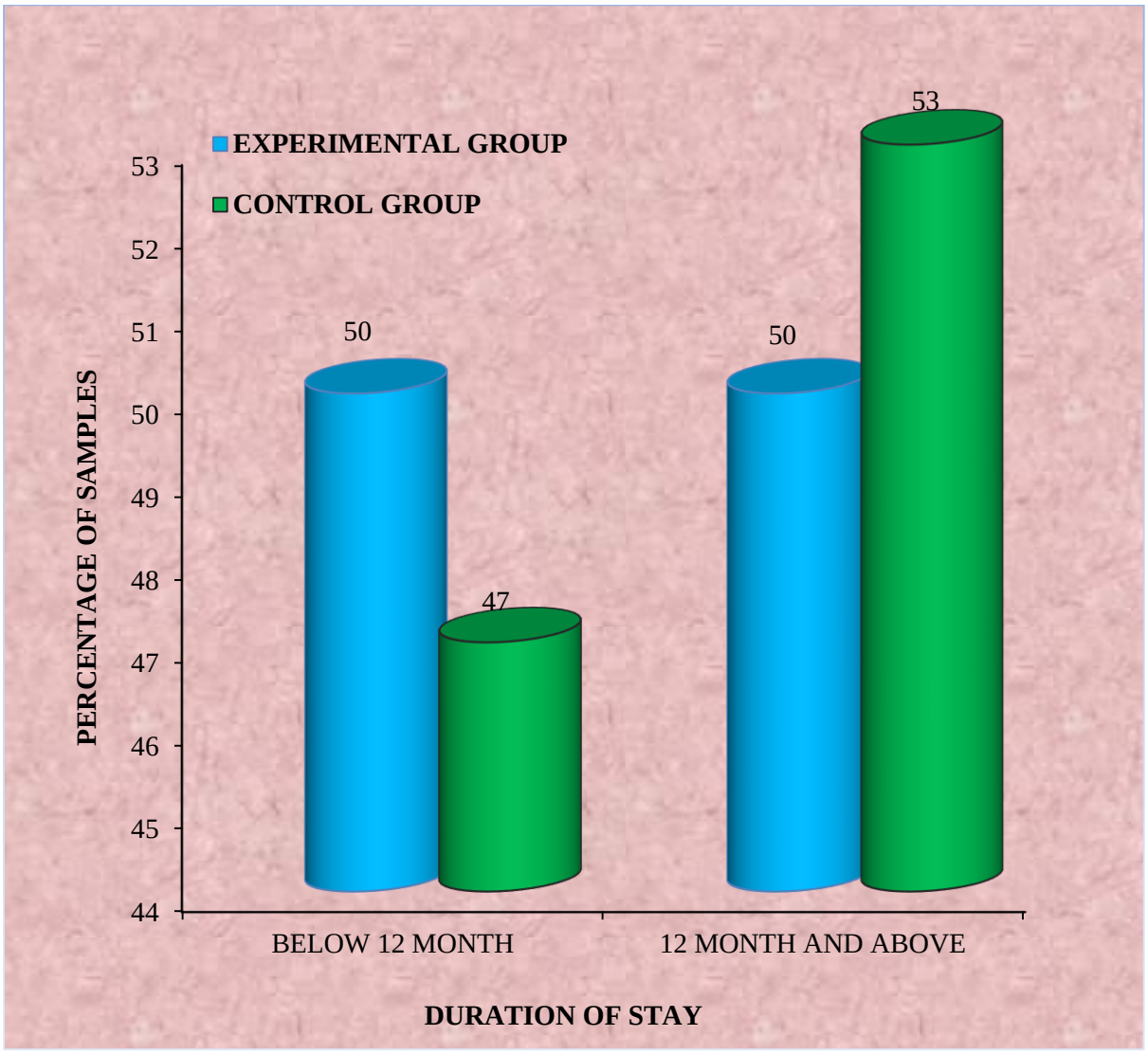


Fig (9.)Frequency and Percentage Distribution of duration of stay among mentally challenged children's.

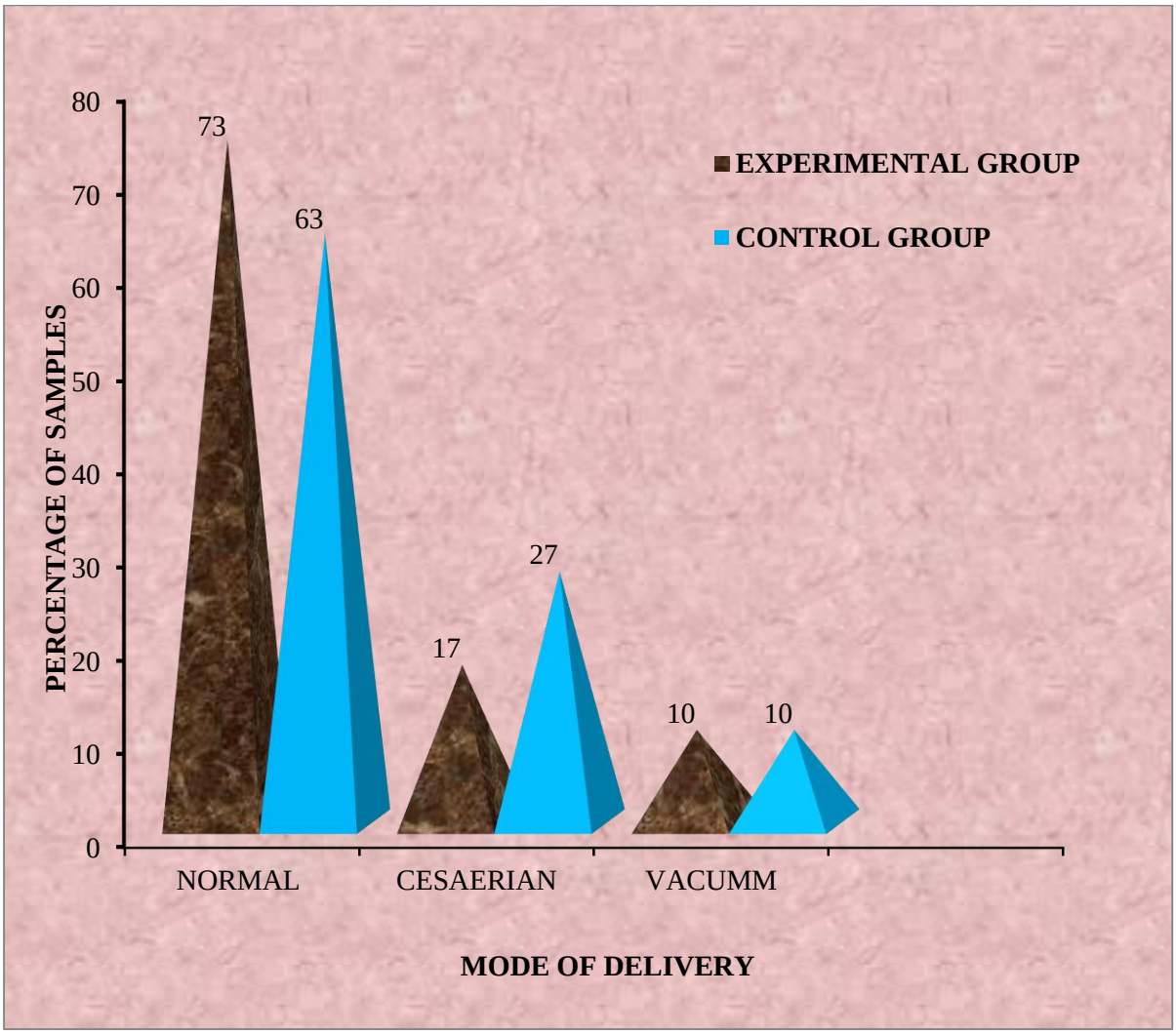


Fig 10) Frequency and Percentage Distribution of mode of delivery among mentally challenged children's.

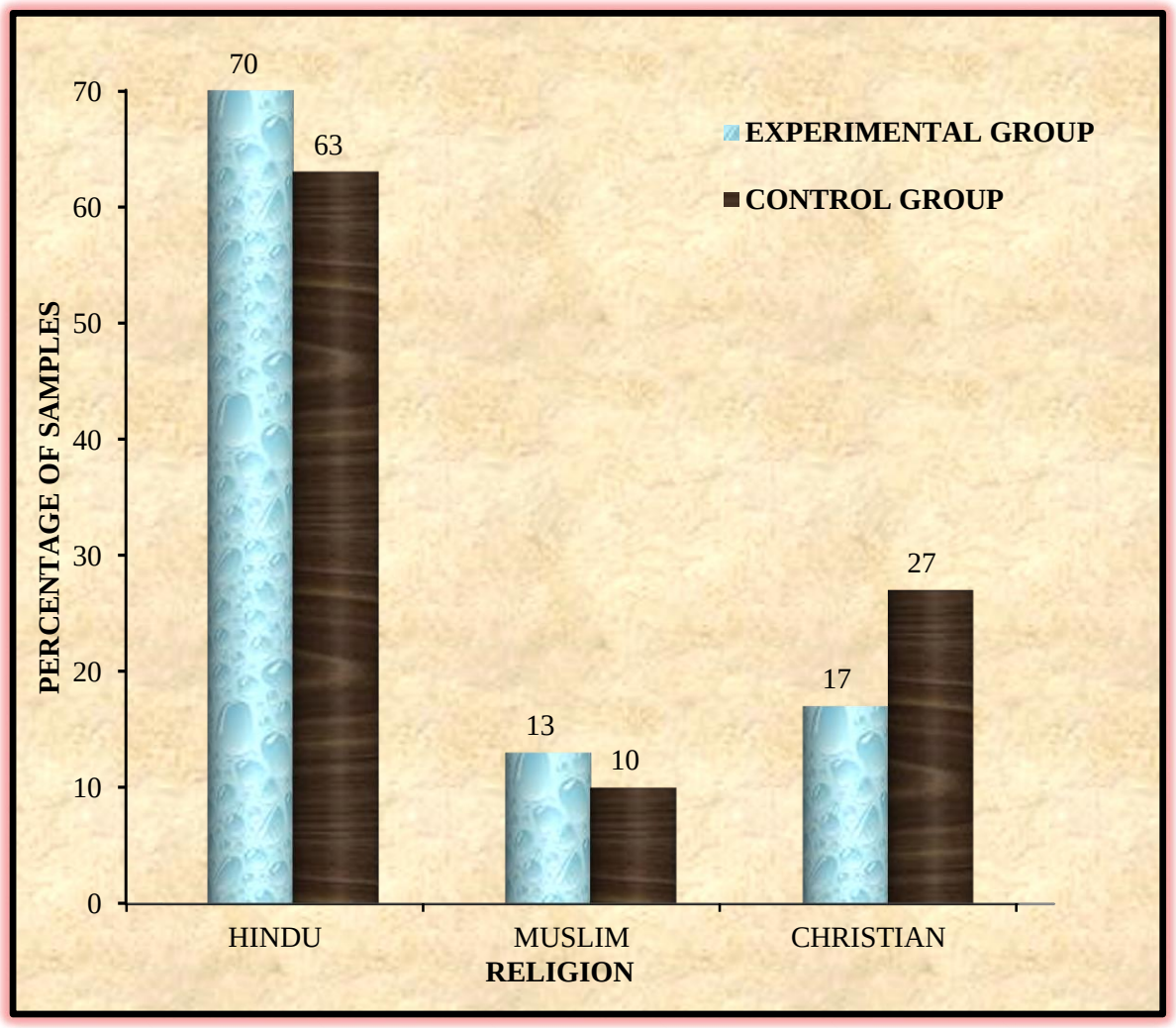


Fig (11) Frequency and Percentage Distribution of religion among mentally challenged children's.

SECTION B:

Table 2: Assess the pre test and post test level of sensory perceptual ability among mentally challenged children's in experimental and control group.

Score Interpretation	Experimental group n=30				Control group n=30			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
Typical Performance (190-155)	--	--	4	13.3	--	--	--	--
Probable Difference (154-142)	8	26.7	14	46.7	7	23.3	8	26.7
Definite Difference (141-38)	22	73.3	12	40	23	76.7	22	73.3

Table 3 depicts the pre-test & post test scores of both experimental & control group. Among the experimental group 8(26.7%) will show probable difference, majority 22(73.3%) will show definite difference, in the pre-test. But in the post-test 4(13.3%) of the samples is on typical performance, and 14(46.7%) of the sample will show probable differences and 12(40%) of the sample is on definite difference. In the control group 7(23.3%) will show probable difference, and 23(76.7%) is on definite difference, in the pre-test. But there was no change in the post test score as 8(26.7%) will show on probable difference and 22(73.3%) is on definite difference.

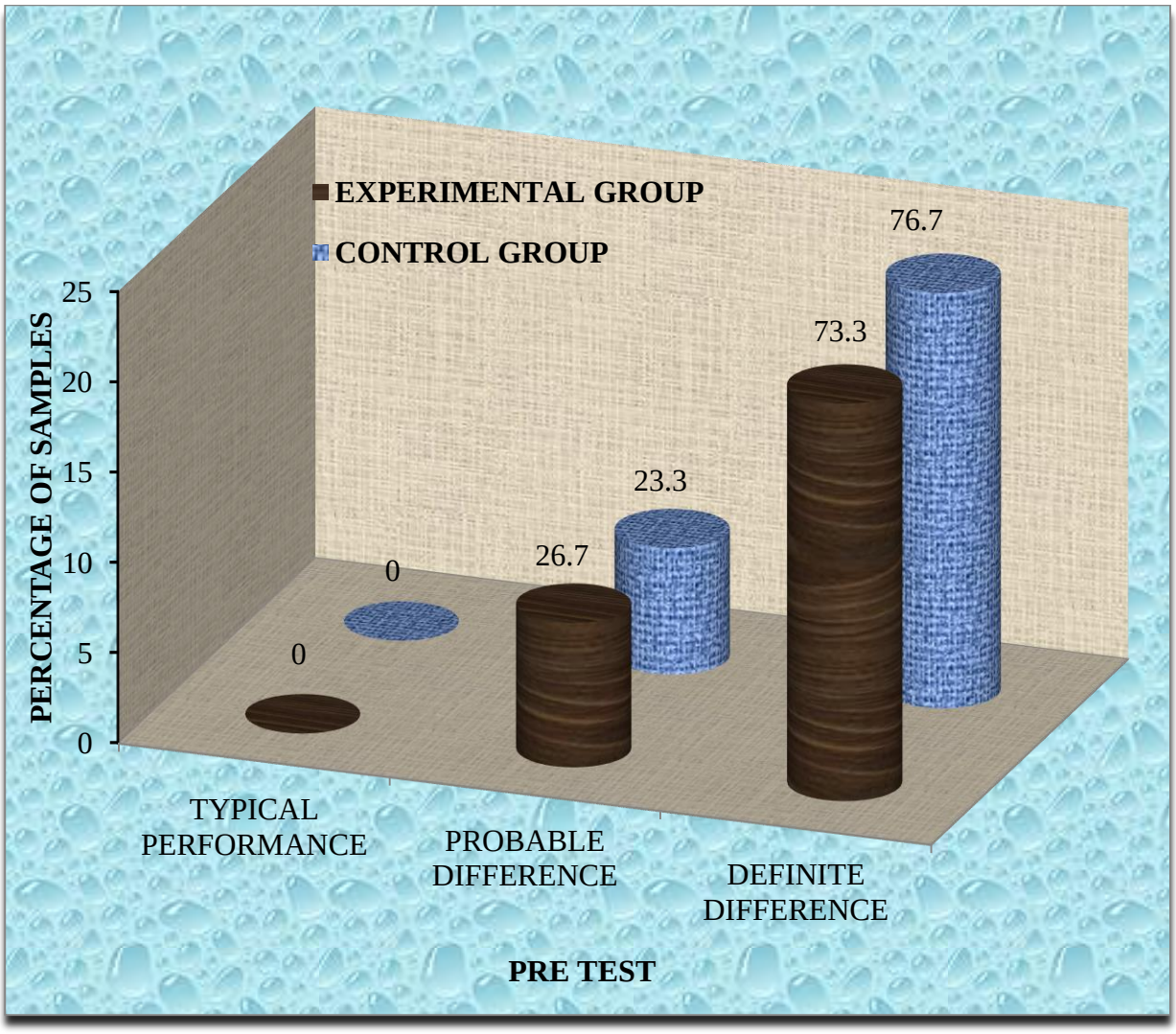
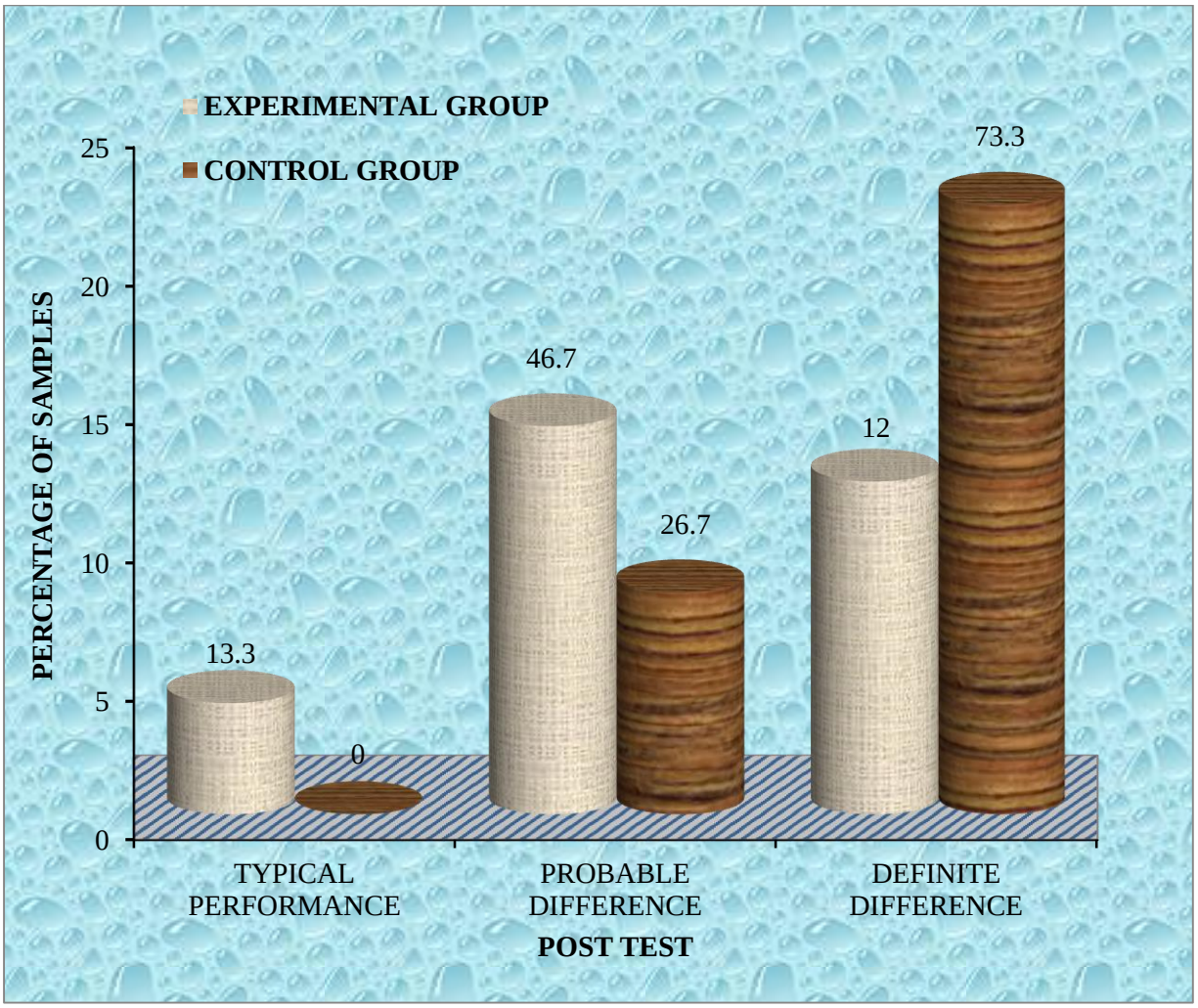


Fig (12) Pre Test Score Level on Sensory Perception of Both Experimental and Control Group.

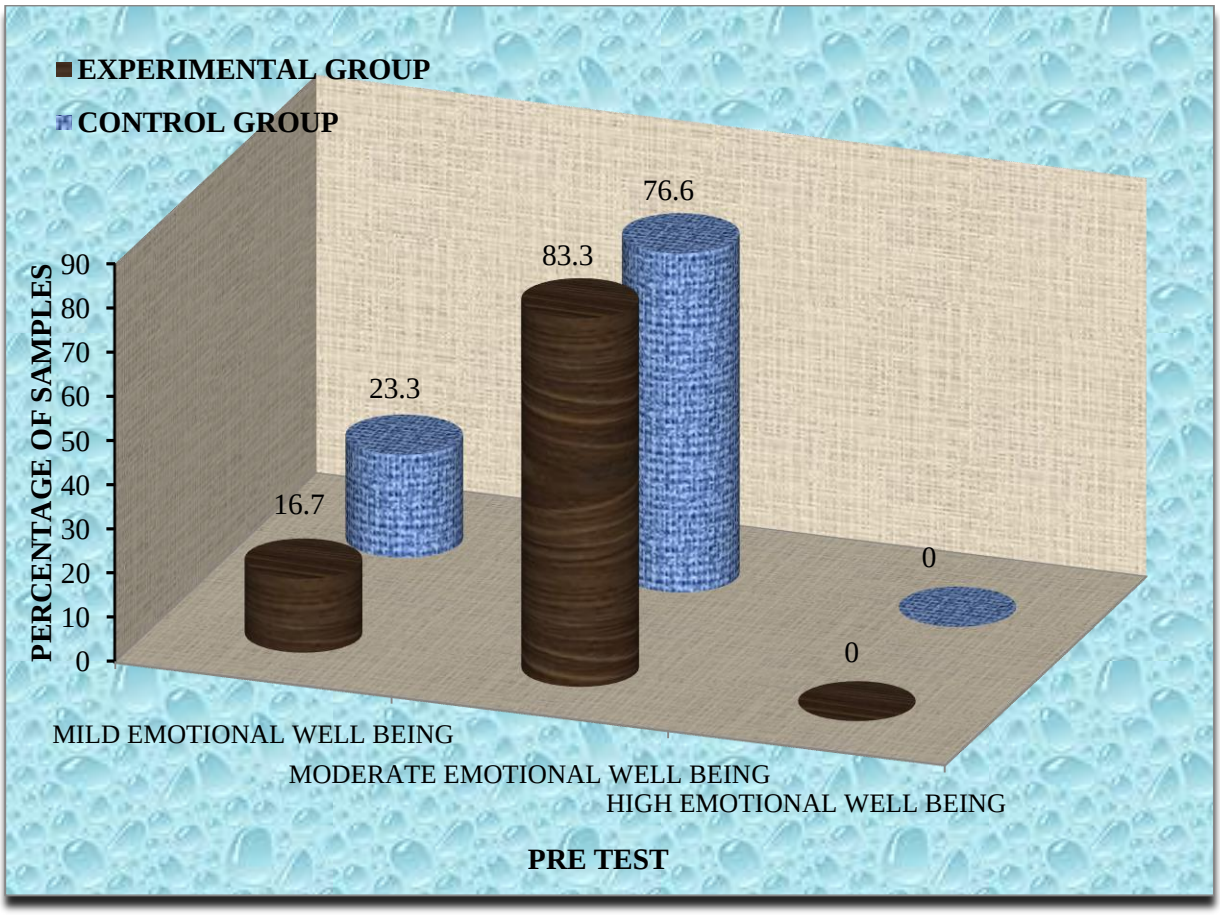


Fig(13) Post Test Score Level on Sensory Perception of Both Experimental and Control Group

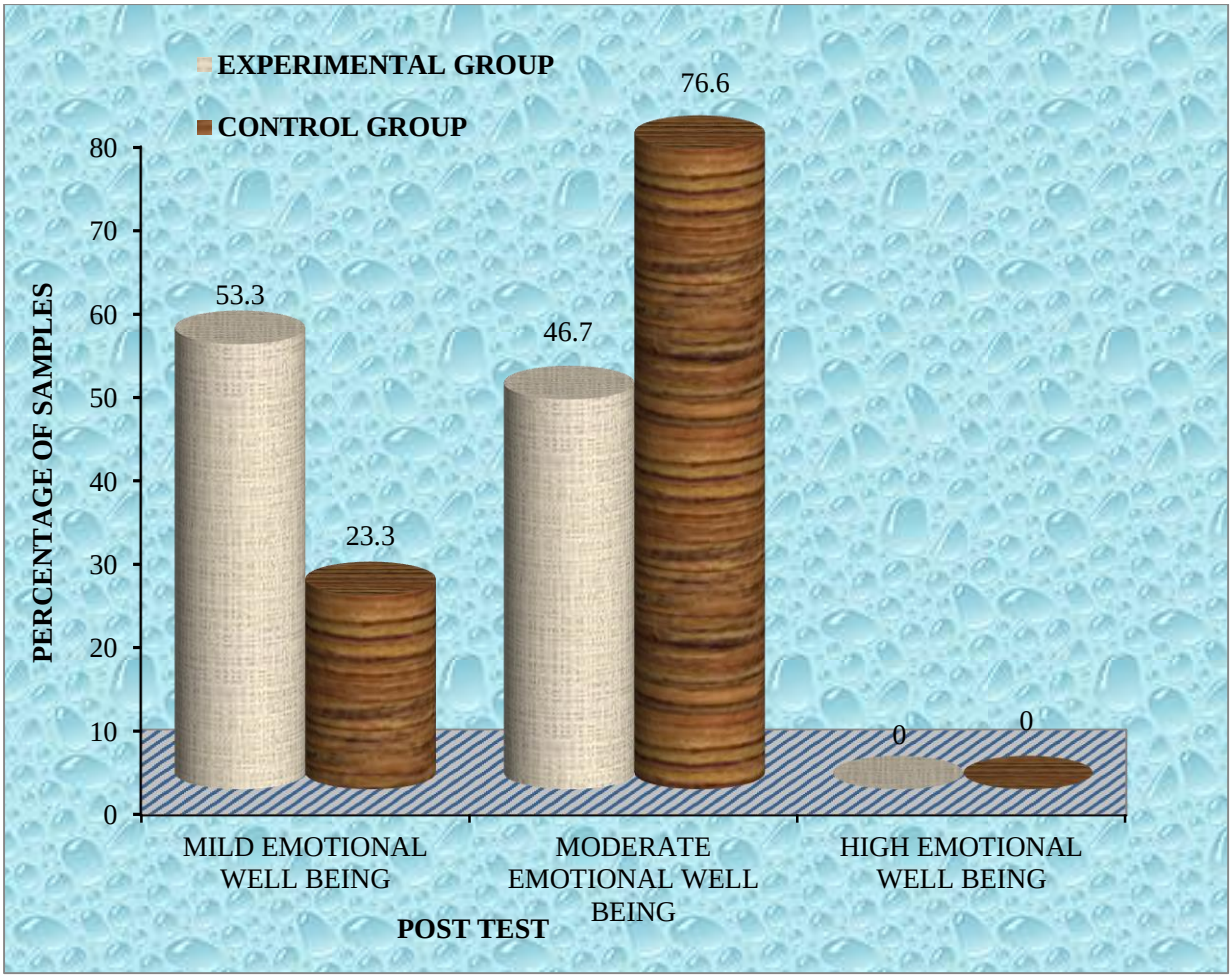
Table 3: Assess the pre-test and post-test level of emotional well-being among mentally challenged children's in experimental and control group.

Score Interpretation	Experimental group n=30				Control group n=30			
	Pre test		Post test		Pre test		Post test	
	f	%	f	%	f	%	f	%
Mild Emotional Well-Being (16-36)	5	16.7	16	53.3	7	23.3	7	23.3
Moderate Emotional Well-Being (37-61)	25	83.3	14	46.7	23	76.6	23	76.6
High Emotional Well-Being (62-80)	--	--	--	--	--	--	--	--

Table 3: above table revealed that the pre-test & post test scores of both experimental & control group. Among the experimental group 5(26.7%) will show mild emotional well-being, majority 25(83.3%) will show moderate emotional well-being, in the pre-test. But in the post-test 16(53.3%) of the samples is on mild emotional wellbeing, and 14(46.7%) of the sample will show moderate emotional well-being. In the control group 7(23.3%) will show mild emotional wellbeing, and 23(76.7%) is on moderate emotional well-being, in the pre-test. But there was no change in the post test score as 7(23.7%) will show mild emotional well-being and 23(76.6%) is on moderate emotional well-being.



Fig(14) Pre Test Score of Emotional Well Being of Both Experimental Group and Control Group



Fig(15) Post Test Score of Emotional Well Being of Both Experimental Group and Control Group

Table 4: Mean pre-test and post-test level of sensory perceptual ability among mentally challenged children in experimental group.

Measurement	Mean	SD	Mean difference	SD difference	Paired 't' value
Pre test	104.7	24.2	8.1	4.4	18.6*** S(p<0.001)
Post test	96.8	20.6			

.

Table: 4 Represents effectiveness of sensory stimulation techniques on sensory perceptual ability among mentally challenged children in experimental group before and after the intervention.

It reveals that in experimental group the mean value is 104.7 before intervention and 96.2 after intervention. The S.D value is 24.2 before intervention and 20.6 after intervention. The difference of mean and S.D is 8.1 and 4.4 respectively. To test significance, 't' test has been applied. The overall paired test value is 18.6.

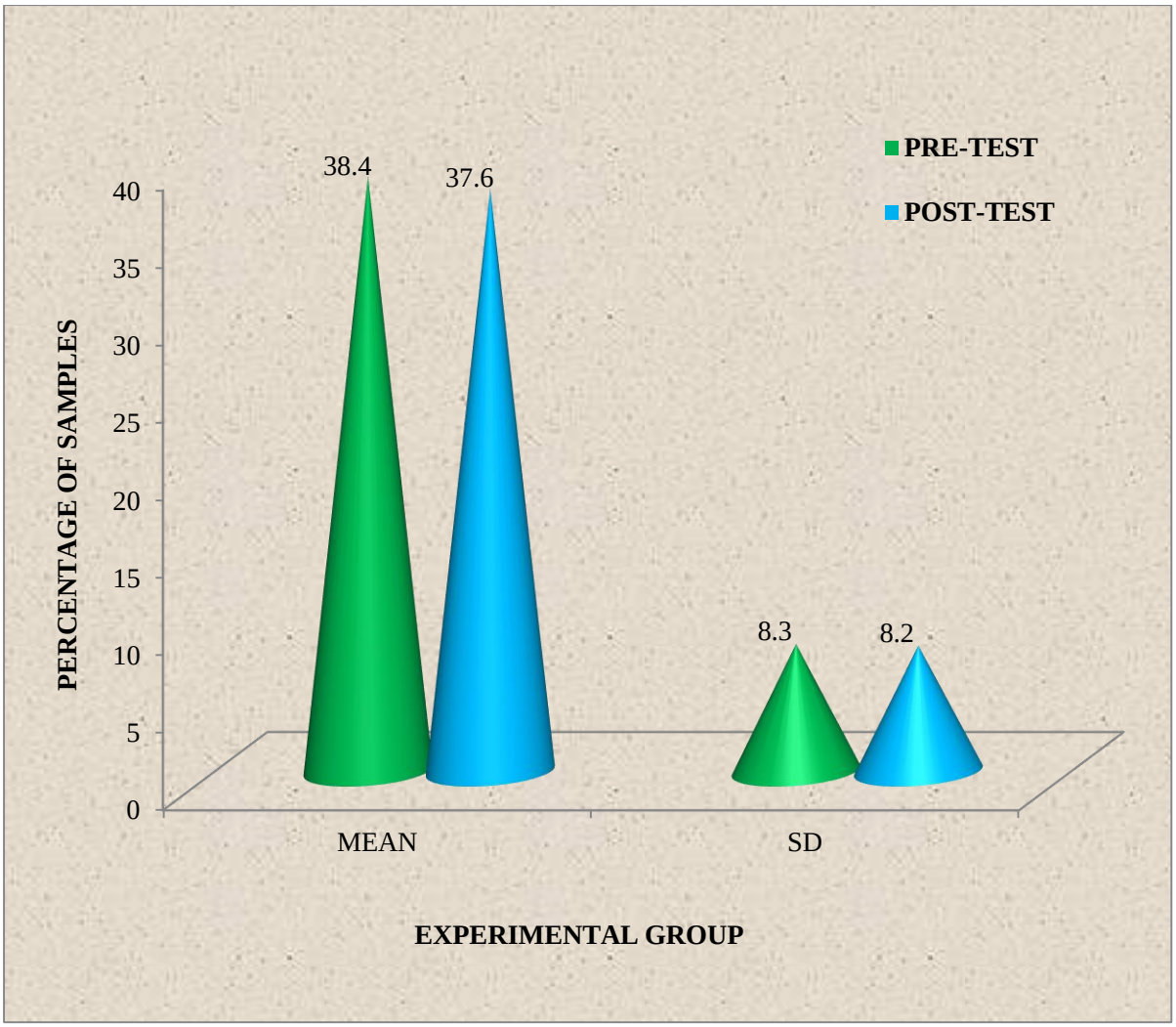


Fig (16) Mean pre-test and post-test level of sensory perceptual ability among mentally challenged children in experimental group.

Table 5: Mean pre-test and post-test level of sensory perceptual ability among mentally challenged children in control group.

Measurement	Mean	SD	Mean difference	SD difference	Paired 't' value
Pre test	103.6	23.4	0.4	0.1	3.4*** S(p<0.001)
Post test	103.2	23.3			

Table: 5 Represents effectiveness of sensory stimulation techniques on sensory perceptual ability among mentally challenged children in control group before and after the intervention.

It reveals that in control group the mean value is 103.6 before intervention and 103.2 after not giving any intervention. The S.D value is 23.4 before intervention and 23.3 after not giving any intervention. The difference of mean and S.D is 0.4 and 0.1 respectively. To test significance, 't' test has been applied. The overall paired test value is 3.4.

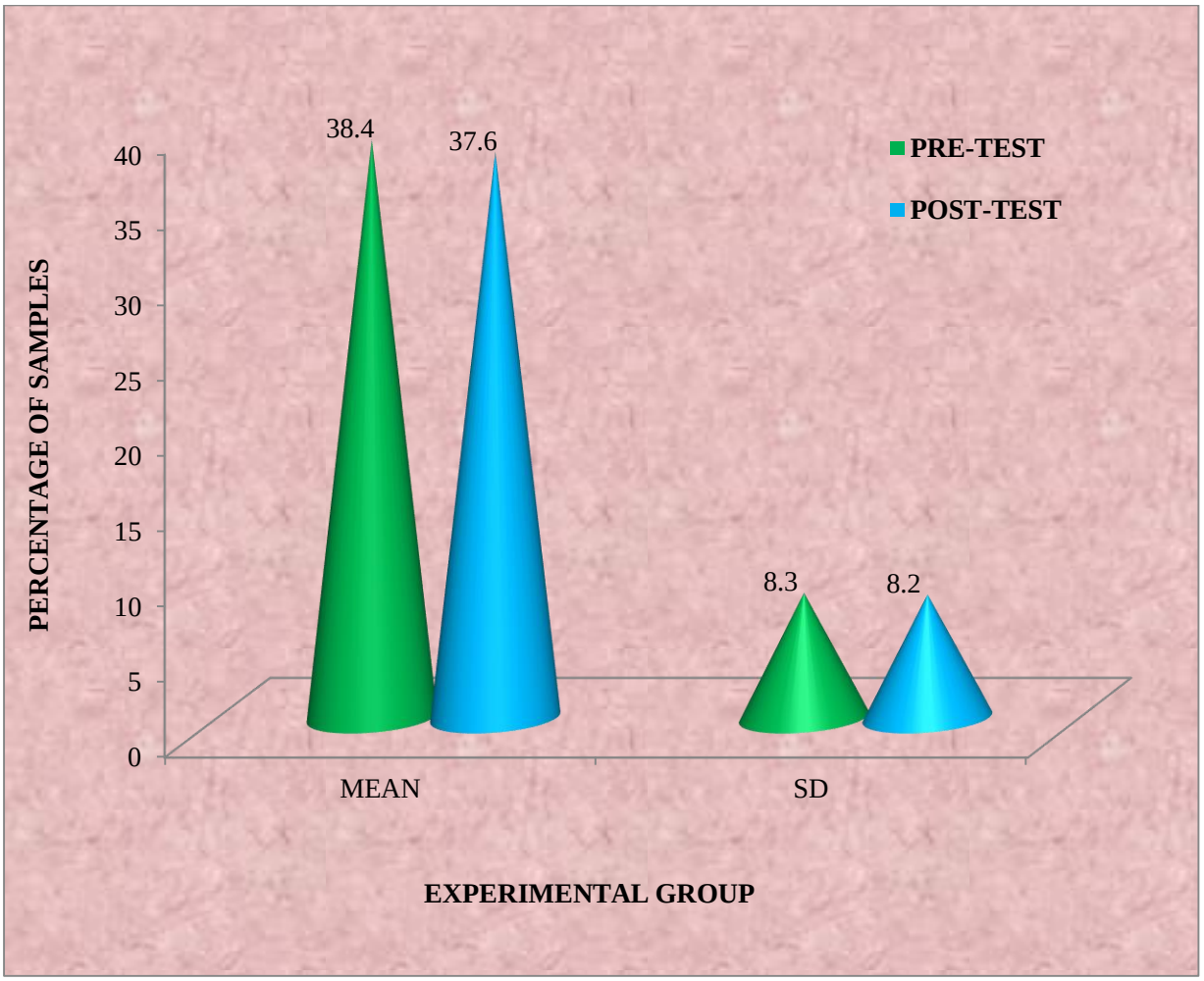


FIG (17) Mean pre-test and post-test level of sensory perceptual ability among mentally challenged children in control group.

Table 6: Mean pre-test and post-test level of emotional well-being among mentally challenged children in experimental group.

Measurement	Mean	SD	Mean difference	SD difference	Paired 't' value
Pre test	41.2	8.1	9.2	2.2	6.1*** S(p<0.001)
Post test	32.0	6.3			

Table 6 represents effectiveness of sensory stimulation techniques on emotional well-being among mentally challenged children in experimental group before and after the intervention.

It reveals that in experimental group the mean value is 41.2 before intervention and 32.0 after intervention. The S.D value is 8.1 before intervention and 6.3 after intervention. The difference of mean and S.D is 9.2 and 2.2 respectively. To test significance, 't' test has been applied. The overall paired test value is 6.1.

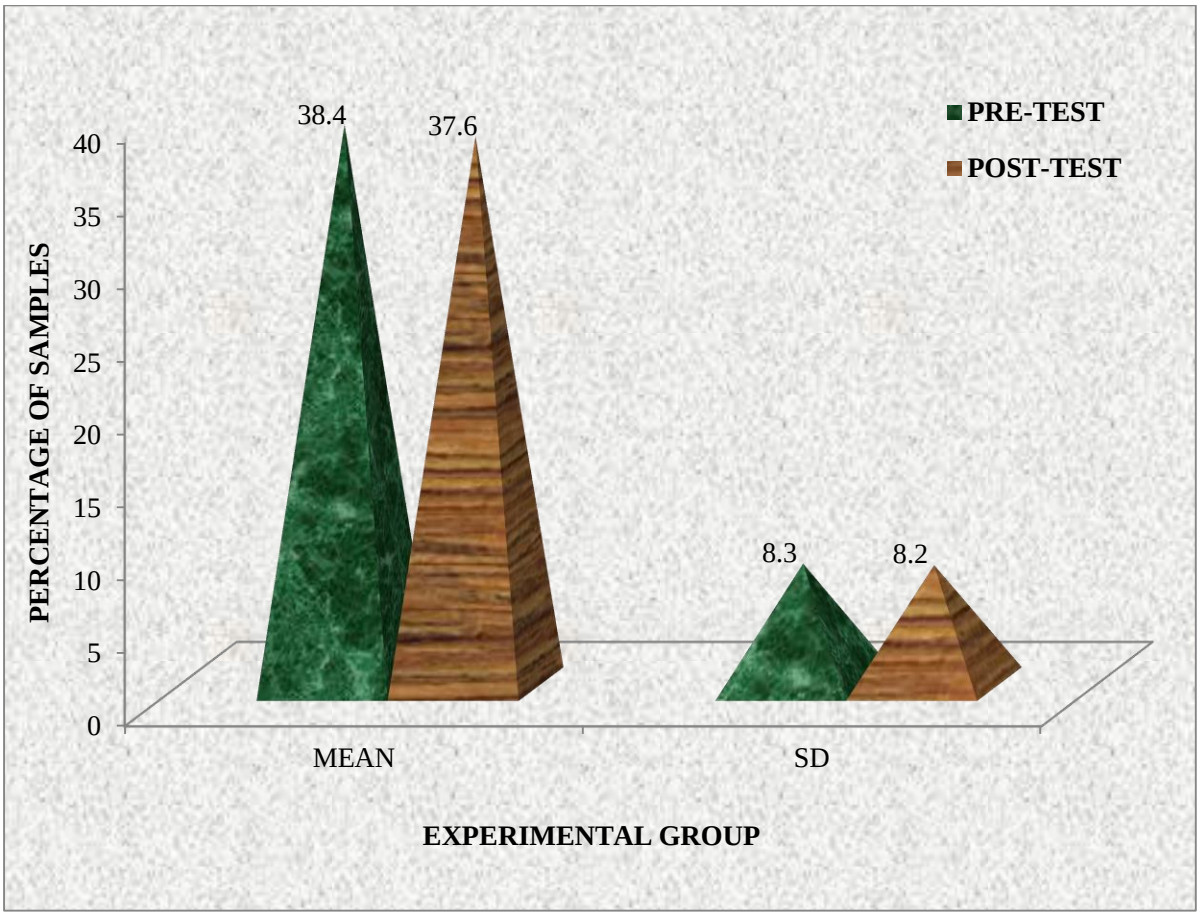


Fig (18) Mean pre-test and post-test level of emotional well-being among mentally challenged children in experimental group.

Table.7 Mean pre-test and post-test level of emotional well-being among mentally challenged children in control group.

Measurement	Mean	SD	Mean difference	SD difference	Paired 't' value
Pre test	38.4	8.3	0.8	0.1	1.3*** S(p<0.001)
Post test	37.6	8.2			

Table 7: represents effectiveness of sensory stimulation techniques on emotional well-being among mentally challenged children in control group before and after the intervention.

It reveals that in control group the mean value is 38.4 before intervention and 37.6 after not giving any intervention. The S.D value is 8.3 before intervention and 8.2 after not giving any intervention. The difference of mean and S.D is 0.8 and 0.1 respectively. To test significance, 't' test has been applied. The overall paired test value is 1.3.

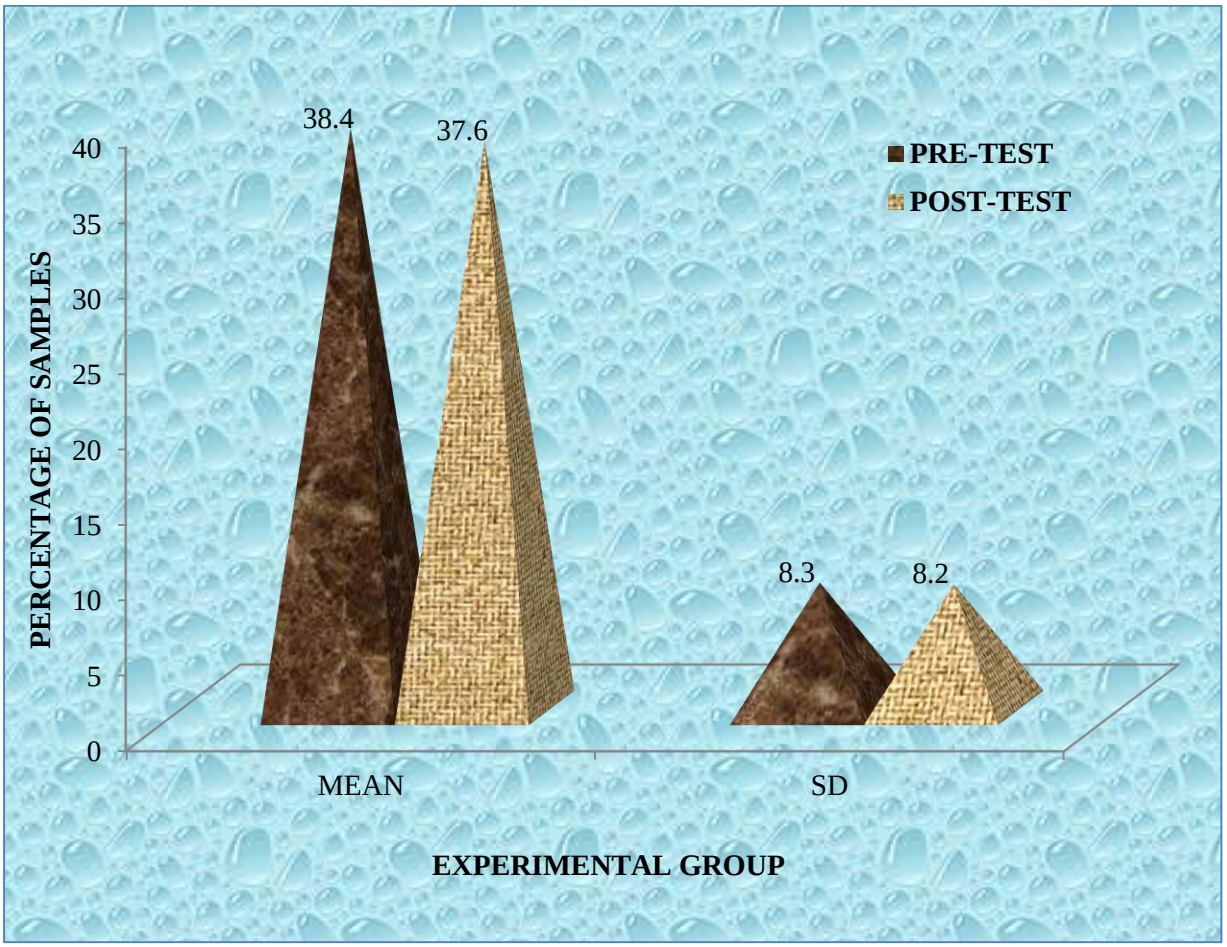


Fig (19) Mean pre-test and post-test level of emotional well-being among mentally challenged children in control group.

Table 8: Comparison of mean post-test sensory perceptual ability among mentally challenged children between experimental group and control group.

Measurement	Mean	SD	paired 't' value
Experimental group	96.8	20.6	18.6 Significant (P< 0.001)
Control group	103.2	23.3	

Table 8 Comparison of mean post-test sensory perceptual ability among mentally challenged children between experimental group and control group**.**

It reveals that in experimental group the mean value is 96.8 was lesser than mean post-test value 103.2 in the control group. The S.D value is 20.6 in the experimental group and 23.3 in the control group. The obtained' value '18.6 was statistically significant at p(<0.001). The above findings indicates that there is a significant difference in the mean post-test level of sensory perceptual ability among mentally challenged children. Thus proving the effectiveness of sensory stimulation techniques in the experimental group.

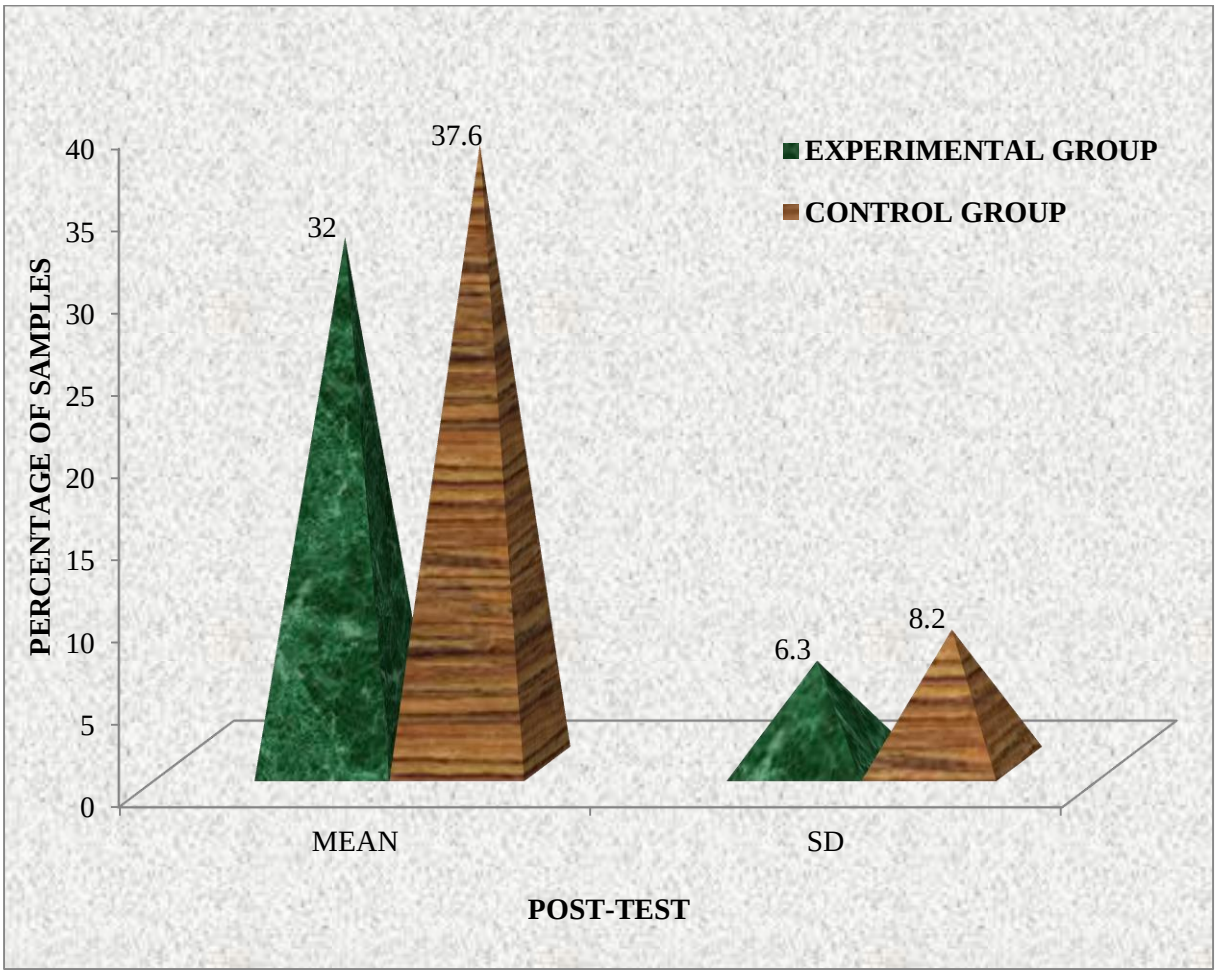


FIG (20) Comparison of mean post-test sensory perceptual ability among mentally challenged children between experimental group and control group.

Table 9: Comparison of mean post-test emotional well-being among mentally challenged children between experimental group and control group.

Measurement	Mean	SD	paired 't' value
Experimental group	32.0	6.3	6.1 Significant (P< 0.001)
Control group	37.6	8.2	

Table 9 Comparison of mean post-test emotional well-being among mentally challenged children between experimental group and control group**.**

It reveals that in experimental group the mean value is 32.0 was lesser than mean post-test value 37.6 in the control group. The S.D value is 6.3 in the experimental group and 8.2 in the control group. The obtained 't' value 6.1 was statistically significant at p(<0.001).. The above findings indicates that there is a significant difference in the mean post-test level of emotional well-being among mentally challenged children.. Thus proving the effectiveness of sensory stimulation techniques in the experimental group.

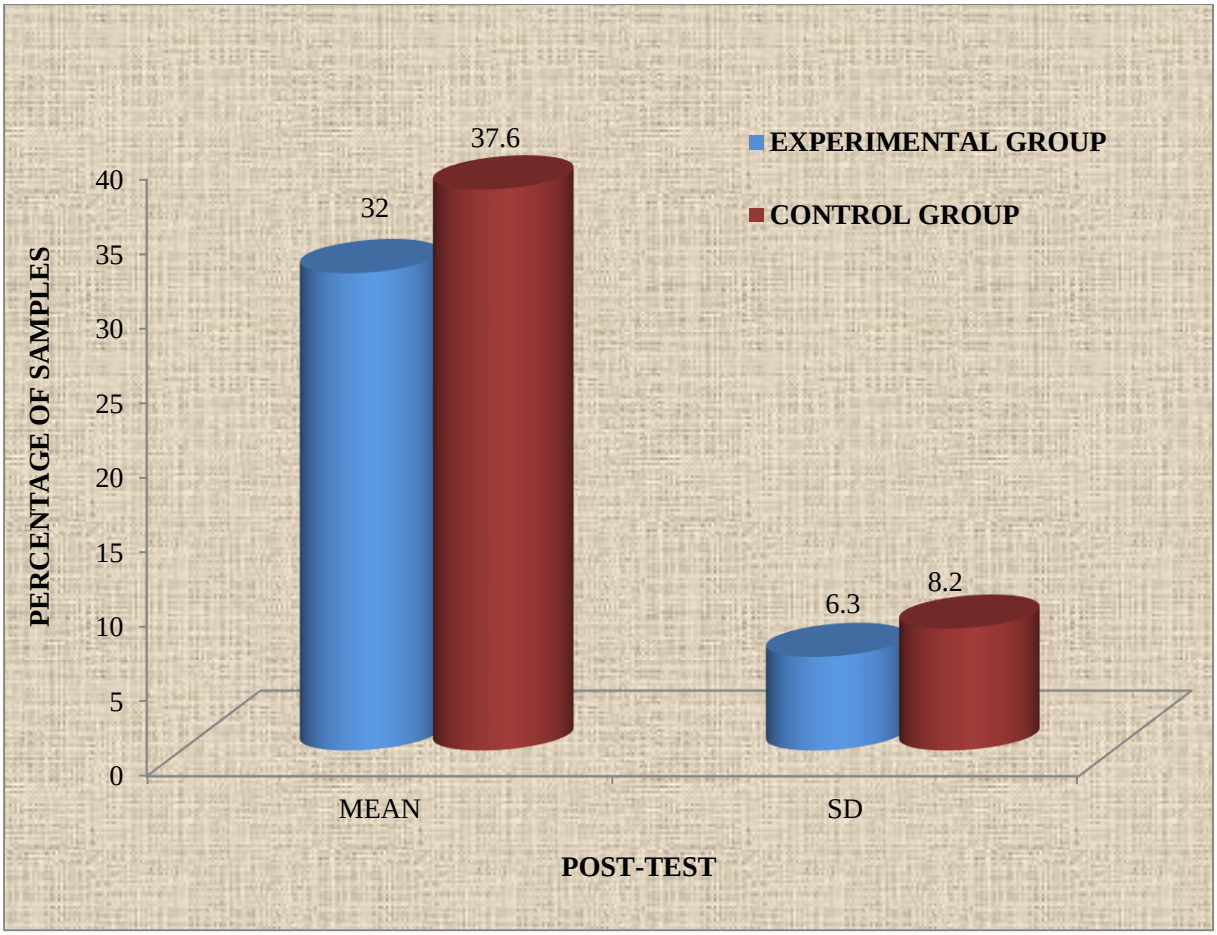


FIG (21) Comparison of mean post-test emotional well-being among mentally challenged children between experimental group and control group.

SECTION. C

Table 10 Association between post-test level of sensory stimulation techniques on sensory perceptual abilities among mentally challenged children and selected demographic variables of samples of experimental group.

Demographic Variable	Typical performance	Probable difference	Definite difference	Chi-Square	df	Table value
Age						
a)5-7 years	1	2	3			
b)8-10 years	1	7	4	1.4	4	8.6
c)11-14 years	2	5	5		ns	
Marital status						
a)Male	3	12	9	0.5	2	31.5
b)Female	1	2	3		ns	
Religion						
a) Hindu	2	10	9		4	
b) Christian	1	2	2	1.1	ns	3.84
c) Muslim	1	2	1			
Duration of stay						
a) Below 12 month	2	10	10	5.6	2	31.5
b) 12 month and above	2	4	9		ns	
Birth order						
a)First	1	11	10		2	
b)Second	2	3	2	0.5	ns	31.5
c)Third and above	1	-	-			
Education						
a) Pre- primary	2	4	10		4	
b) Primary	1	5	2	8.9	s	8.6
c) Upper-primary	1	5	-			

Education of care giver						
a) Illiterate	1	3	2		4	
b) Primary	1	3	2	7.8	ns	8.6
c) Secondary	1	5	3			
d) Graduate	1	3	5			
Type of hostel						
a)Hostel	1	4	7	2.8	2	3.15
b)Days scholar	3	10	5		ns	
Mode of Delivery						
a)Normal	1	11	10		4	
b)Caesarean	2	2	1	8.1	ns	8.6
c)Vacuum	1	1	1			

NS – Not Significant S - Significant

Table 10 : shows that there is significant association between post-test level of sensory perception with demographic variables such as education .

Table.11 Association between post-test level of sensory stimulation techniques on emotional well-being among mentally challenged children and selected demographic variables of samples of experimental group.

Demographic Variable	Mild emotional well-being	Moderate emotional well-being	High emotional well-being	Chi-square	df	Table value
Age						
a) 5-7 years	3	3	0		4	
b) 8-10 years	8	4	0	2.9	ns	8.6
c) 11-14 years	9	3	0			
Marital status						
a) Male	15	7	0	7.1	2	31.5
b) Female	5	3	0		ns	
Religion						
a) Hindu	15	5	0		4	
b) Christian	4	2	0	6.6	ns	8.6
c) Muslim	1	3	0			
Duration of stay						
a) Below 12 month	9	10	0	5.6	2	31.5
b) 12 month and above	9	2	0		ns	
Birth order						
a) First	12	6	0		3	12.9
b)Second	5	6	0	3.9	ns	
c)Third and above	1	-	0			
Education						
a) Pre- primary	2	4	0			
b) Primary	10	6	0	9.2	4	8.6
c) Upper-primary	6	2	0		ns	

Education of care giver						
a) Illiterate	2	3	0			
b) Primary	2	3	0	5.9	4	8.6
c) Secondary	7	4	0		ns	
d) Graduate	6	3	0			
Type of hostel						
a) Hostel	8	4	0	3.6	2	3.15
b) Days scholar	8	10	0		ns	
Mode of Delivery						
a) Normal	13	9	0		4	
b) Caesarean	3	2	0	5.8	ns	8.6
c) Vacuum	2	1	0			

NS – Not Significant S - Significant

Table 11 : shows that there is significant association between post-test level of emotional well-being with demographic variables such as education .

DISCUSSION

CHAPTER – V

DISCUSSION

The main focus of the study is to assess the effectiveness of sensory stimulation techniques on sensory perceptual ability and emotional well-being among mentally challenged children in attending a selected special school. The study findings were discussed based on the objectives as follows

DEMOGRAPHIC FINDINGS OF THE STUDY

A study reveals that in experimental group 6(20%) of the samples were in the age group of 5-7 years, majority 13(43%) of samples belonged to the age group of 8-10 years, 11(37%) belonged to age group 11-14 years. In the control group 8(27%) of the samples were in the age group of 5-7 years majority 11(37%) of samples belonged to the age group of 8-10 years, 11(36%) belonged to age group 11-14 years.

Regarding the gender status 24(80%) of the samples were male and 6(20%) of the samples were female in the experimental group. In the control group 23(77%) of the samples were male and 7(23%) of the samples were female.

Regarding birth order 22(73.3%) of the samples were first, 7(24%) of the samples are second, 1(3%) of the samples were third and above in the experimental group. In the control group 13(43%) of the samples were first, 12(40%) of the samples are second, 5(17%) of the samples were third and above.

Regarding the religion 21(70%) of the samples were Hindu, 4(13%) of the samples are Muslim, 5(17%) of the samples were Christian in the experimental group. In the control group 19(63%) of the samples were Hindu, 3(10%) of the samples are Muslim, 10(27%) of the samples were Christian.

With educational level of care giver, 6(20%) of the samples were Illiterate, 6(20%) of the samples had primary education, 7(30%) of the samples had secondary education and 7(30%) of the samples were graduates in the experimental group. In the control group, 5(17%) of the samples were Illiterate, 8(26.7%) of the samples had primary, 9(30%) of the samples had secondary and 8(26%) of the samples were graduates.

Regarding the type of stay 12(40%) of the samples were hostel and 18(60%) of the samples were days scholar in the experimental group. In the control group 12(40%) of the samples were hostel and 18(60%) of the samples were days scholar.

Regarding educational level , in the experimental group6 (20%) of the samples are pre-primary and 16(53%) of the samples are primary and 8(27%) of the sample are upper-primary. In the control group 8(27%) of the samples are pre-primary and12 (40%) of the samples are pre-primary and 10(33) of the samples are upper-primary.

Regarding the duration of stay 15(50%) of the samples were below 12 month and 15(50%) of the samples were above 12 month in the experimental group. In the control group 14(47%) of the samples were below 12 month and 16(53%) of the samples were above 12 month.

Regarding mode of delivery, in the experimental group 22 (73%) of the samples are normal and 5(17%) of the samples are caesarian and 3(10%) of the sample are vacuum. In the control group 19(63%) of the samples are normal and 8 (27%) of the samples are caesarian and 3(10%) of the samples are vacuum

1. To assess the level of sensory perception and emotional wellbeing among mentally challenged children before and after administering sensory stimulation technique among experimental and control group.

The tables revealed that Among the experimental group 8(26.7%) will show probable difference on the sensory perceptual ability and, majority 22(73.3%) will show definite difference on the sensory perceptual ability, in thepre-test was assessed But in the post test4 (13.3%) of the samples is on typical performance, and 14(46.7%) of the sample will show probable differences and12(40%) of the sample is on definite difference on sensory perception.. In the control group 7(23.3%) will show probable difference on sensory perceptual ability, and 23(76.7%) is on definite difference on sensory perceptual ability, in the pre-test. But there was no change in the post test score as 8(26.7%) will show on probable difference on sensory perceptual ability and 22(73.3%) is on definite difference on sensory perceptual ability.

Among the emotional well-being in the experimental group 5(26.7%) will show mild emotional well-being, majority 25(83.3%) will show moderate emotional well-being , in the pre-test. But in the post-test 16(53.3%) of the samples is on mild emotional well-being , and 14(46.7%) of the sample will show moderate emotional well-being. In the control group 7(23.3%) will show mild emotional well being , and 23(76.7%) is on moderate emotional well being , in the pre-test. But there was no change in the post test score as 7(23.7%) will show mild emotional well being and 23(76.6%) is on moderate emotional well being

2. To determine the effectiveness of sensory stimulation technique on sensory perception and emotional wellbeing among experimental group.

It reveals that in experimental group the mean value is 104.7 before intervention and 96.2 after intervention. The S.D value is 24.2 before intervention and 20.6 after intervention. The difference of mean and S.D is 8.1 and 4.4 respectively. To test significance, 't' test has been applied. The overall paired test value is 18.6 . represents effectiveness of sensory stimulation techniques on sensory perceptual ability among mentally challenged children in experimental group. In control group the mean value is 103.6 before intervention and 103.2 after not giving any intervention. The S.D value is 23.4 before intervention and 23.3 after not giving any intervention. The difference of mean and S.D is 0.4 and 0.1 respectively. To test significance, 't' test has been applied. The overall paired test value is 3.4.

Among the emotional well-being It reveals that in experimental group the mean value is 41.2 before intervention and 32.0 after intervention. The S.D value is 8.1 before intervention and 6.3 after intervention. The difference of mean and S.D is 9.2 and 2.2 respectively. To test significance, 't' test has been applied. The overall paired test value is 6.1 represents effectiveness of sensory stimulation techniques on emotional well-being among mentally challenged children. In control group the mean value is 38.4 before intervention and 37.6 after not giving any intervention. The S.D value is 8.3 before intervention and 8.2 after not giving any intervention. The difference of mean and S.D is 0.8 and 0.1 respectively. To test significance, 't' test has been applied. The overall paired test value is 1.3.

3. To compare the level of sensory perceptual ability and emotional wellbeing among both experimental and control group

Among the sensory perceptual ability It reveals that in experimental group the mean value is 96.8 was lesser than mean post test value 103.2 in the control group. The S.D value is 20.6 in the experimental group and 23.3 in the control group. The obtained 't' value '18.6 was statistically significant at p(<0.001).. The above findings indicates that there is a significant difference in the mean post test level of sensory perceptual ability among mentally challenged children. Thus proving the effectiveness of sensory stimulation techniques in the experimental group.

Among the emotional well being It reveals that in experimental group the mean value is 32.0 was lesser than mean post test value 37.6 in the control group. The S.D value is 6.3 in the experimental group and 8.2 in the control group. The obtained 't' value 6.1 was statistically significant at p(<0.001).. The above findings indicates that there is a significant difference in the mean post test level of emotional well-being among mentally challenged children. Thus proving the effectiveness of sensory stimulation techniques in the experimental group.

4. To associate the level of sensory perception and emotional wellbeing with demographic variables

The association between the level of sensory perceptual ability with the selected demographic variables in post test was assessed. By using chi- square it was statistically found that the selected demographic variable such as education level of children has significant relationship with the post level of sensory perceptual ability at the level of $p< 0.001$.

The association between the level of emotional well-being with the selected demographic variables in post-test was assessed . By using chi- square it was statistically found that the selected demographic variable such as education level of children has significant relationship with the post level of emotional well-being at the level of $p< 0.001$.

SUMMARY AND CONCLUSION

CHAPTER VI

SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

This chapter deals with the summary, conclusions, nursing implications, recommendations and limitations of the study.

SUMMARY:

The purpose of the study was A quasi experimental pre and post-test design is selected for the study to assess the effectiveness of sensory stimulation technique on sensory perceptual ability and emotional wellbeing among mentally challenged children at selected special school.

OBJECTIVES OF THE STUDY

1. To assess the level of sensory perception and emotional wellbeing among mentally challenged children before and after administering sensory stimulation technique among experimental and control group.
2. To determine the effectiveness of sensory stimulation technique on sensory perception and emotional wellbeing among experimental group.
3. To compare the level of sensory perceptual ability and emotional wellbeing among both experimental and control group.
4. To associate the level of sensory perception and emotional well being with Demographic variables.

Review of literature was done from primary and secondary resources which enable the investigator to study in depth of the selected problem statement, to develop conceptual framework to construct the tool and analysis of data and for interpretation.

The conceptual frame work selected for this study was derived from **Callista Roy`s Adaptation** theory (1996). It was an appropriate model which provide comprehensive framework to achieve the objectives of the study.

For the present study a quasi-experimental research approach is used. A nonrandomized control group design was adopted for the study. **The tool used consists of demographic variables and SHORT SENSORY PROFILE designed by** WINNIE DUNN, Ph.D,OTR,FAOTA **.**

The Pilot Study was conducted in Akshara School, Amma Illam, Puthiya Uthayam.

Special school after getting permission from the principal of the special school. It was conducted for a period of 5 days. The investigator adopted a non-probability purposive sampling technique. Sample number of 6 mentally challenged children's in special school who fulfilled the inclusion criteria was selected, 3 samples were in the experimental group and another 3 samples in the control group. The purpose of the study was explained to the parents and teacher and written consent was obtained with reassurance that the data would be kept confidential. The reliability was established by using Test Re Test method.

The study was found to be feasible to proceed with the main study. The pilot study was conducted after getting formal permission and ethical clearance.

The main study was conducted at Akshara, Amma illam, Puthiya uthayam special school. The samples were selected on the basis of purposive sampling techniques. The data collected was analysed and interpreted based on their objectives using descriptive and inferential statistics.

MAJOR FINDINGS OF THE STUDY

A study reveals that in experimental group 6(20%) of the samples were in the age group of 5-7 years, majority 13(43%) of samples belonged to the age group of 8-10 years, 11(37%) belonged to age group 11-14 years. In the control group 8(27%) of the samples were in the age group of 5-7 years majority 11(37%) of samples belonged to the age group of 8-10 years, 11(36%) belonged to age group 11-14 years.

Regarding the gender status 24(80%) of the samples were male and 6(20%) of the samples were female in the experimental group. In the control group 23(77%) of the samples were male and 7(23%) of the samples were female.

Regarding birth order 22(73.3%) of the samples were first, 7(24%) of the samples are second, 1(3%) of the samples were third and above in the experimental group. In the control group 13(43%) of the samples were first, 12(40%) of the samples are second, 5(17%) of the samples were third and above.

Regarding the religion 21(70%) of the samples were Hindu, 4(13%) of the samples are Muslim, 5(17%) of the samples were Christian in the experimental group. In the control group 19(63%) of the samples were Hindu, 3(10%) of the samples are Muslim, 10(27%) of the samples were Christian.

With educational level of care giver, 6(20%) of the samples were Illiterate, 6(20%) of the samples had primary education, 7(30%) of the samples had secondary education and 7(30%) of the samples were graduates in the experimental group. In the control group, 5(17%) of the samples were Illiterate, 8(26.7%) of the samples had primary, 9(30%) of the samples had secondary and 8(26%) of the samples were graduates.

Regarding the type of stay 12(40%) of the samples were hostel and 18(60%) of the samples were days scholar in the experimental group. In the control group 12(40%) of the samples were hostel and 18(60%) of the samples were days scholar.

Regarding educational level, in the experimental group6 (20%) of the samples are pre-primary and 16(53%) of the samples are primary and 8(27%) of the sample are upper-primary. In the control group 8(27%) of the samples are pre-primary and12 (40%) of the samples are pre-primary and 10(33) of the samples are upper-primary.

Regarding the duration of stay 15(50%) of the samples were below 12 month and 15(50%) of the samples were above 12 month in the experimental group. In the control group 14(47%) of the samples were below 12 month and 16(53%) of the samples were above 12 month.

Regarding mode of delivery, in the experimental group 22 (73%) of the samples are normal and 5(17%) of the samples are caesarean and 3(10%) of the sample are vacuum. In the control group 19(63%) of the samples are normal and 8 (27%) of the samples are caesarean and 3(10%) of the samples are vacuum

The pre-test & post test scores of both experimental & control group. Among the experimental group 8(26.7%) will show probable difference, majority 22(73.3%) will show definite difference, in the pre-test. But in the post-test 4(13.3%) of the samples is on typical performance, and 14(46.7%) of the sample will show probable differences and12(40%) of the sample is on definite difference. In the control group 7(23.3%) will show probable difference, and 23(76.7%) is on definite difference, in the pre-test. But there was no change in the post test score as 8(26.7%) will show on probable difference and 22(73.3%) is on definite difference.

NURSING IMPLICATIONS

The investigator had drawn the following implication for the study which were vital concern in the field of nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE

- The study findings revealed that nurses plays an important role in providing care to the mentally challenged children.
- The study findings indicate the benefits of sensory stimulation techniques to mentally challenged children with sensory problems.
- Understand the importance of sensory stimulation techniques as an adjuvant to non-pharmacologic therapy.
- The health care team members are to be encouraged in teaching their children's that will benefit their health.

NURSING EDUCATION

- Encourage the students to learn about the techniques and benefits of sensory perception.
- Nurse educators should emphasize the involvement of sensory stimulation techniques in the management of various sensory problems.
- Nurse educators must educate the students and staffs regarding various sensory stimulation techniques that can be implemented for the care of the mentally challenged children.

- Nurse educators must lay emphasis about the importance of sensory stimulation techniques in improving sensory perceptual abilities and performance of activity of mentally challenged children's.

NURSING ADMINISTRATION

- The administrators has the highest responsibility in helping and providing nurses with the substantive continuing nursing education programme, as this will enable nurses to update their knowledge, acquire special skills in managing the children's with sensory stimulation problems.
- The administrators can encourage the nurses to use different safe, cost effective sensory stimulation techniques among mentally challenged children..
- Provide opportunities for nurses to attend in service education regarding complimentary sensory integration therapies.
- Initiate measures for introduction of sensory stimulation techniques as a form of physical therapy in various settings.

NURSING RESEARCH

- As evident from the review of literature further research needs to be conducted to support the effectiveness of sensory stimulation techniques on sensory perceptual ability among mentally challenged children. There is a need for extensive and intensive research in this area to generate more specific data base and to identify the benefits of the therapies and provide much needed information for the providers and the consumers.
- More research studies can be conducted to check the effectiveness of sensory stimulation techniques on various sense organ problem.
- Disseminate the findings through conferences, seminars, publication in professional, national, international journals and the world web

RECOMMENDATIONS

- The same study can be conducted for large sample for better generalization.
- A similar study can be conducted on a long term basis, longitudinal study.
- A similar study can be conducted for the effectiveness of sensory stimulation techniques on different settings for different children's.

- The study can be conducted to find out the effectiveness of self instructional learning by the use of media.
- This study can be done as a comparative study in different settings.

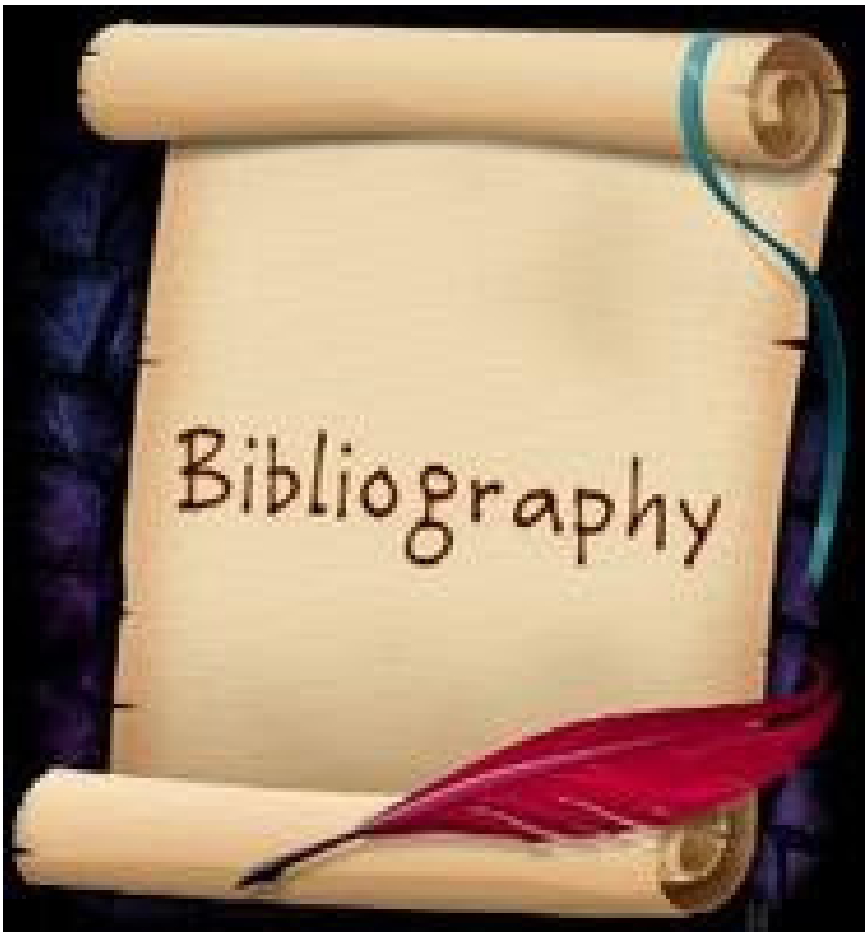
LIMITATIONS

The limitation of the study was:

- Since the sample size was 60, the findings should be generalized with caution.
- The setting of the study was chosen due to the researcher's familiarity and it was not by random selection. Due to methodological limitation, the findings should be generalized only to the selected special school.

CONCLUSION

The result showed that most of the mentally challenged children in special school suffered from sensory problems by using scales it shows definite difference and probable differences due to impaired in normal activity and result of sensory perceptual disability. The study reveals the effectiveness of sensory stimulation techniques on sensory perpetual ability and emotional well-being on mentally challenged children's. The difference was found to be statistically significant at $p<0.001$ which indicates its effectiveness.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    - 5) http:// www. wikipedia.com
    - 6) http:// www. Pubmed.com
    - 7) http:// www. medlineplus.com

APPENDIX

APPENDIX A

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY

From:

V.Kathiredan,
M.Sc Nursing II year,
Jainee college of Nursing,
Dindigul.

To:

Dr.Deen Westley, MBBS.,MD
Consultant Psychiatrist,
Govt Head Quaters Hospital,
Dindigul.

Respected madam,

Sub: Requisition for content validity tool.

I am doing M.Sc Nursing II year in Jainee College of Nursing, Dindigul under M.G.R Medical University, Gundy, Chennai. As a partial fulfilment of my M.Sc Nursing Degree Programme, I am conducting a research on **A STUDY TO ASSESS THE EFFECTIVENESS OF SENSORY STIMULATION TECHNIQUE ON SENSORY PERCEPTUAL ABILITY AND EMOTIONAL WELL-BEING ON MENTALLY CHALLENGED CHILDREN ATTENDING A SELECTED SPECIAL SCHOOL,AT DINDIGUL DISTRICT**

A tool has been developed for the research study. I am sending the above stated for your expert and valuable opinion. I will be thank full for your kind consideration. Kindly return in to the undersigned.

Thanking You

Yours Sincerely

(V.Kathiresan)

APPENDIX B

CERTIFICATE OF ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to that dissertation work "**A STUDY TO ASSESS THE EFFECTIVENESS OF SENSORY STIMULATION TECHNIQUE ON SENSORY PERCEPTUAL ABILITY AND EMOTIONAL WELL-BEING ON MENTALLY CHALLENGED CHILDREN ATTENDING A SELECTED SPECIAL SCHOOL,AT DINDIGUL DISTRICT"** done by **Mr.V.Kathiresan,** II year M.Sc Nursing student of Jainee College of Nursing , Dindigul is edited for English Language appropriateness by **Mr.Manimozhiselvan.**

Signature

APPENDIX C

LETTER SEEKING PERMISSION FOR CONDUCT THE STUDY

From:

V.Kathiredan,

M.Sc Nursing II year,

Jainee college of Nursing,

Dindigul.

To:

District differently abled welfare officer,

Dindigul.

Through proper channel: Principal Jainee College Of Nursing.

Respected sir,

This is bring to your kind information that as per our nursing Curriculum , nursing research and statistics I have to conduct an Project **"A STUDY TO ASSESS THE EFFECTIVENESS OF SENSORY STIMULATION TECHNIQUE ON SENSORY PERCEPTUAL ABILITY AND EMOTIONAL WELL-BEING ON MENTALLY CHALLENGED CHILDREN ATTENDING A SELECTED SPECIAL SCHOOL, AT DINDIGUL DISTRICT."**

I request to allow me to conduct my research in the special schools in your contact please do the needful.

Thank you

Yours Sincerely

(V.Kathiresan)

Principal

APPENDIX D

DEMOGRAPHIC VARIABLES

PART – I DEMOGRAPHIC VARIABLES

Introduction

The following items seek information about you. Kindly choose appropriate one. The data will be kept confidential

DATA COLLECTION TOOL

PART – I: DEMOGRAPHIC DATA

1. **Age in years** ☐
   a)5-7 years
   b)8-10 years
   c)11-14 years

2. **Gender** ☐
   a)Male
   b)Female

3. **Birth order** ☐
   a)First
   b)Second
   c)Third and above

4. **Religion** ☐
   a)Hindu
   b)Christian
   c)Muslim

5. **Duration of stay** ☐
   a)Below 12 month
   b)12 month and above

6. **Education level of care giver** ☐

a)Illiterate

b)Primary

c)Secondary

d)Graduate

7. **Education** ☐

a)Pre-primary

b)Primary

c)Upper-primary

8. **Type of stay** ☐

a)hostel

b)days scholar

9. **Mode of delivery** ☐

a)Normal

b)caesarean

c)vacuum

APPENDIX E

SHORT SENSORY PROFILE

WINNIE DUNN, Ph.D., OTR, FAOTA

Childs Name: Birth day: Date:

Completed by: Relationship to child:

Item	Tactile sensitivity	Always	freq uently	Occasion-nally	seldom	never
1	Expresses distress during grooming (for e g ;fights or cries during hair cutting, face washing,					
2	Prefers long-sleeved clothing when it is warm or short sleeves when it is cold					
3	Avoids going barefoot, especially in sand or grass					
4	React emotionally or aggressively to touch					
5	withdraws from splashing water					
6	Has difficulty standing in line or close to other people					
7	Rubs or scratches out a spot that has been touched					
SECTION RAW SCORE TOTAL						

tem	Taste/smell sensitivity	Always	frequently	Occasion-nally	Seldom	Never
8.	Avoids certain tastes or food smells that are typically part of children's diets.					
9.	Will only eat certain tastes.					
10.	Limits self to particular food textures/temperatures.					
11.	Picky eater, especially regarding food textures.					
SECTION RAW SCORE TOTAL						

Item	Movement sensitivity	Always	frequently	Occasion-nally	Seldom	Never
12.	Become anxious or distressed when feet leave the ground.					
13.	Fears falling or heights.					
14.	Dislikes activities where head is upside down (for example somer salts, rough housing.					
SECTION RAW SCORE TOTAL						

Item	Under responsive/seeks Sensation	Always	frequently	Occasionally	seldom	Never
15	Enjoys strange noises/seeks to make noise for noise's sake					
16	Seeks all kinds of movement and this interferes with daily routines (for e g : can't sit still, fidgets)					
17	Becomes overly excitable during movement activity					
18	Touches people and objects					
19	Doesn't seem to notice when face or hands are messy					
20	Jumps from one activity to another so that it interferes with play					
21	Leaves clothing twisted on body					
SECTION RAW SCORE TOTAL						

Item	Auditory filtering	Always	frequently	Occasionally	Seldom	Never
22	It distracted or has trouble functioning if there is a lot of noise around					
23	Appears to not what you say (for eg; does not "tune-in" to what you say, appears to ignore you)					
24	Can't work with background noise (for eg: fan, refrigerator)					
25	Has trouble completing tasks when the radio is on					
26	Doesn't respond when the radio is on					
27	Has difficulty paying attention					
SECTION RAW SCORE TOTAL						

Item	Low energy/weak	Always	frequently	Occasionally	Seldom	Never
28	Seems to have weak muscles					
29	Tires easily, especially when standing or holding particular body position					
30	Has a weak grasp					
31	Can't lift heavy objects (for example, weak in comparison to same age children)					
32	Props to support self (even during activity)					
33	Poor endurance/tires easily					
SECTION RAW SCORE TOTAL						

Item	Visual/auditory sensitivity	Always	frequently	Occasionally	Seldom	Never
34	Respond negatively to unexpected or loud noises (for eg: cries or hides at noise from vacuum cleaner, dog barking, hair dryer)					
35	Holds hands over ears to protect ears from sound					
36	Is bothered by bright lights after others have adapted to the light					
37	Watches everyone when they move around room					
38	Covers eyes or squints to protect eyes from light					
SECTION RAW SCORE TOTAL						

	தொடுதலின் உணர்வுகள்	எப்பொழுதும்	அடிக்கடி	எப்போதாவது	கொஞ்சம்	எப்பொழுதும்
1	கேசத்தை வெட்டும்பொழுது அல்லது முகத்தை நீரினால் கழுவும்போது சண்டையிடுதல் அல்லது அழுதல்					
2	னீண்ட ஆடை அணியும் போது வெப்பமாகவும் குறுகிய ஆடையை அணியும்போது குளிர்ச்சியாகவும் இருக்கும்					
3	மணல் அல்லது புல்வெளியில் பாதணிகள் அணியாமல் நடப்பதை தவிர்க்க வேண்டும்					
4	ஒருவரைத் தொடும்போது உணர்ச்சி வசப்படுதல் அல்லது கடுமையாக நடந்து கொள்ளுதல்					
5	கொப்பளித்த நீரை வெளியே துப்புதல்					
6	வரிசையில் ஒழுங்காக நிற்கமுடியாது அல்லது அடுத்தவருடன் நெருங்கி பழகுவது சிரமமானது					
7	தொடுகின்ற இடத்தை தேய்தல் அல்லது சுரண்டுதல்					

	சுவை - நுகர்தலின் போது ஏற்படும் உணர்வுகள்	எப்பொழுதும்	அடிக்கடி	எப்போதாவது	கொஞ்சம்	எப்பொழுதும்
8	சில சுவைகளை தவிர்த்தல் அல்லது குழந்தைகளின் பத்திய உணவில் பொதுவாக காணப்படும் வாசனைகள்					
9	குறிப்பிட்ட சில சுவையுள்ள உணவை உண்ணுதல்					
10	இழைவுகள் அல்லது வெப்பநிலைகளில் சில குறிப்பிட்ட உணவுகளை அளவோடு உண்ணுதல்					
11	சேகரிக்கப்பட்ட உணவுகளை குறிப்பாக தின்னும் தொடர்பு					

	நகர்தலின் ஏற்படும் போது உணர்வுகள்	எப்பொழுதும்	அடிக்கடி	எப்போதாவது	கொஞ்சம்	எப்பொழுதும்
12	அடிக்கடி ஆர்வத்தை விட்டு விலகுதல் அல்லது மன உளைச்சலில் காணப்படுதல்					
13	வீழ்ச்சி அல்லது உயரங்களை கண்டு பயப்படுதல்					
14	விரும்பத்தகாத செயல்பாடுகள் அதாவது தலைகாழாக தலையை வைத்தல் (உதாரணமாக கல் உப்பில் மண்டியிடுதல், கரடுமுரடான வீடுகள்)					

	தேடலின் போது ஏற்படும் உணர்வுகள்	எப்பொழுதும்	அடிக்கடி	எப்போதாவது	கொஞ்சம்	எப்பொழுதும்
15	வித்தியாசமான சத்தத்தை விரும்புதல்/இரைச்சலான சத்தத்தை உருவாக்குதல்					
16	தினசரி நடைமுறைகளை அனைத்து வகையான இயக்கங்களுடன் செய்ய முற்படுதல்(எ.கா:ஓரிடத்தில் உட்கார முடிட்யாது,அமைதியின்றி இருத்தல்)					
17	இயக்கம் செயல்படும்போது அதிகமாக கிளர்ச்சித்தல் உண்டாதல்					
18	மக்கல் மற்றும் பொருட்களை தொடுதல்					
19	கவனிக்காத போது முகம் அல்லது கைகள் சுத்தமில்லாமல் இருக்குமா					
20	ஒரு செயல்பாட்டிலிருந்து மற்றொரு செயல்பாட்டிற்கு தாவும்போது அச்செயல் விளையாட்டிற்குஇடையூறாக இருக்கும்					
21	ஒழுங்கற்ற முறையில் ஆடைகளை அணிதல்					

	கேட்டலின் திறன் அறிதல்	எப்பொழுதும்	அடிக்கடி	எப்போ தாவது	கொஞ்சம்	எப்பொழுதும்
22	வெளியில் இருந்து வரும் சத்தமானது நாம் செய்கின்ற வேலையை திசைதிருப்பும் அல்லது இடையூறாக இருக்கும்					
23	சுற்றுப்புறத்திலிருந்து வரும் சத்தத்தினால் வேலை பார்க்கப்படும்(எ.கா:மின்விசிறி,குளிர்சாதனப்பெட்டி)					
24	இலக்கினை அடைய செய்யும் வேலையில் வானொலி சத்தம் தடையை உண்டக்குமா					
25	வானொலி ஒலிபரப்பின்போது எவ்வித பதிலுரைகளும் வராது					
26	கவனம் செலுத்துவதில் குறைபாடு உள்ளதா					

	குறைந்த திறன் அல்லது சோர்வு	எப்பொழுதும்	அடிக்கடி	எப்போ தாவது	கொஞ்சம்	எப்பொழுதும்
27	பார்ப்பதற்கு தசைகள் வலுவிழந்து காணப்படுதல்					
28	னிற்கும்பொழுதோ அல்லது எதையாவது பிடித்துக் கொண்டு இருக்கு பொஃஸ்ஹுதோ சீக்கிரத்தில் சோர்வடைதல்					
29	பொருளை பிடிப்பதில் வலுவிழத்தல்					
30	கணமான பொருளை தூக்க முடியாது(எ.கா:ஒரே வயதுள்ள குழந்தைகள்)					
31	தனக்குத் தானே துணையாக இருத்தல்(எல்லா செயல்களிலும்)					
32	நீடித்து உழைக்கும் திறன் இல்லாமை					

	பார்த்தலின் மற்றும் கேட்டலின் திறன் அறிதல்	எப்பொழுதும்	அடிக்கடி	எப்போதாவது	கொஞ்சம்	எப்பொழுதும்
33	எதிர்பாராத திருப்பம் அல்லது அதிகமான சத்தமானது எதிர்மறையாக செயல்பட வைக்கும்.(எ.கா:வாக்யூம் கிளீனர்,நாய் குரைத்தல்,ஹேர் ட்ரையர் சத்தம்)					
34	வெளியில் இருந்து வரும் சத்ததினால் காதுகளை மூடுதல்					
35	அதிகமான வெளிச்சத்தை உணரும்போது சூழ்நிலைக்கு தகுந்தவாறு ஒளியை ஏற்றுக்கொள்ளுதல்					
36	நம்மை சுற்றியுள்ளவர்களை எப்பொழுதும் கவனித்தல்					
37	மாறுகண் நோய் வராமல் தடுக்க வெளிச்சத்திலிருந்து கண்களை பாதுகாத்தல்					

SCORING INTERPRETATION

SCORE KEY

1 = ALWAYS 2 = FREQUENTLY

3 = OCCASIONALLY 4 = SELDOM

5 = NEVER

Section	Section Raw Total	Typical Performance	Probable Difference	Definite Difference
Tactile sensitivity	/35	35.....30	29.....27	26.....?
Taste /smell sensitivity	/20	20.....15	14.....12	11.....4
Movement sensitivity	/15	15.....13	12.....11	10.....3
Under-responsive/seeks sensation	/35	35.....27	26.....24	23.....?
Auditory filtering	/30	30.....23	22.....20	19.....6
Low energy/weak	/30	30.....26	25.....24	23.....6
Visual /auditory sensitivity	/25	25.....19	18.....16	15.....5
TOTAL	**/190**	**190-------155**	**154--------142**	**141-------38**

APPENDIX F

EMOTIONAL WELL-BEING SCALE

It was a non- standardized tool . It is simple well laid out consists of 16 items. The rating scale is helpful to assess the emotional well-being level of mentally challenged children.

Here researcher can identify the what the children experiencing past four week by using sensory stimulation techniques..

ITEMS

1. Positive
2. Negative
3. Good
4. Bad
5. Pleasant
6. Unpleasant
7. Concentrated
8. Interested
9. Stressed
10. Happy
11. Sad
12. Angry
13. Afraid
14. Loving
15. Depressed
16. Joyful

SCORE INTEPRETATION

The interpretation of scoring is graded as follows:

1 indicate always

2 indicate frequently

3 indicates occasionally

4 indicate seldom

5 indicates never.

Scoring Range

For each item the scoring was given as follows

16-36 indicate mild emotional well-being.

37-61 indicate moderate emotional well-being.

62-80 indicate high emotional well-being.

APPENDIX G

PROCEDURE FOR SENSORY STIMULATION TECHNIQUE FOR MENTALLY CHALLENGED CHILDREN.

Introduction

Our senses… sight, smell, taste, touch and hearing connect our minds with the world around us. Many children experience difficulties with some of the senses. When this happens to mentally challenged children, it can contribute to some of the confusion that he/she is already experiencing. Although the children may not always be able to make sense of complicated sensory stimuli, he/she still derives enjoyment from pleasant sensations and is turned off by unpleasant ones. Stimulating the senses of the mentally challenged children has many positive benefits. There are no boundaries to sensory stimulation; it can include a variety of activities, and is limited only when the facilitator limits it.

NOTE: Before giving sensory stimulation techniques I consult with speech-language pathologist and occupational therapist. Ask the therapist how long to expose the child to the stimulus and appropriate level of intensity. Because inappropriate stimulation can be dangerous for children's.

I.HEARING

Listening to sounds is a very important aspect of getting in touch with our senses. Although many children's have hearing impairments, it is still important to stimulate this sense, keeping in mind that modifications may need to be made.

It consider

- Loud noise makers (e.g., whistle, cow bell)
- Animal sound
- Music's
- Familiar voices and conversation
- Environment sound

II.TOUCH

Meaningful touch can be an extremely important communication tool with people with mentally challenged children. Whether it is a hug, a handshake, or simply holding hands, touching elicits an emotional response that is unparalleled. Even basic touching, such as a touch on the shoulder should be incorporated into any interaction.

- Temperature (e.g., hot/cold)
- Textured fabric (e.g., soft and hard side of Velcro, feathers)
- Textured balls
- Modelling clay
- Sand
- Brushes

III.MOVEMENT SENSITIVITY

Many benefits have been found by creating an environment that gently stimulates all of the senses. Although we have listed many specific activities, it is important to constantly keep an environment alive, offering opportunities for stimulating as many senses as possible.

- Jump (e.g., from chair or bed)
- Crab walk
- Run within the circle
- Skipping

IV.SMELL

The sense of smell is one of the most meaningful in terms of connecting us to our past and bringing back memories. No matter what your age, ability or disability, smells have a powerful effect. They can be pleasant, strong, relaxing, or comforting, and can elicit many emotions. Think of how you feel when you smell a warm batch of bread baking in the oven and the memories it brings to mind.

- Familiar scents (e.g., mother perfume, air freshners)
- Contrasting scents(sweet vs pungent)

- Odours of foods (e.g., citrus, coffee, onion, garlic)
- Oils (e.g., peppermint, lavender, eucalyptus ,citrus)

V.VISION

No matter what your age, it is pleasing to view something you consider beautiful or memorable.

It consider:

- Black and white color photographs (e.g. action, pets)
- Picture of different shapes and color
- moving object
- Watching TV shows consisting of beautiful scenery, animals (if they derive joy from animals), or beautiful lights

VI.TASTE

Food can bring back many memories.

- Pure lemon juice
- Sugar
- Vinegar
- Spicy foods
- Salt /soya sauce

TIPS:

- Do not allow the child to concentrate on or become distracted by a stimulus for too long.
- Try to assign meaning and function when using the stimulus items. Tell the child why you are using it or playing with it. (e.g., “we are going to see if you like the taste of new thing today)
- Present noises intermittently. Noises should not be continuous.
- Expose children to text labels on picture to encourage language skills.

APPENDIX H

CONSENT FORM

Title of Project: Effectiveness of sensory stimulation technique on sensory perceptual ability and emotional well-being on mentally challenged children attending a selected special school**.**

PLEASE INITIAL EACH BOX AND SIGN / DATE BOTTOM OF FORM.

1. I, as parent / guardian of ……, have read the information sheet for the above study with my child and agree to participate. (……..)

2. I, along with my child, have been given the opportunity to ask questions relating to this research and they have been answered to our satisfaction. (……..)

3. We understand that, apart from the final feedback questionnaire, all assessments and sensory stimulation techniques sessions occur within the usual occupational therapy programme regardless of this research. (……..)

4. We both understand that our participation is voluntary and that we are free to withdraw at any time, without giving any reason. (……..)

APPENDIX I

PHOTOGRAPHS